

PRIMARY 2

DISCOVER

Teacher's Guide

2019/2020

Term 1

FOREWORD

This is a pivotal time in the history of the Ministry of Education and Technical Education (MOETE) in Egypt. We are embarking on the transformation of Egypt's K-12 education system starting in September 2018 with KG1, KG2 and Primary 1 continuing to be rolled out year after year until 2030. We are transforming the way in which students learn to prepare Egypt's youth to succeed in a future world that we cannot entirely imagine.

MOETE is very proud to present this new series of textbooks, Discover, with the accompanying digital learning materials that captures its vision of the transformation journey. This is the result of much consultation, much thought and a lot of work. We have drawn on the best expertise and experience from national and international organizations and education professionals to support us in translating our vision into an innovative national curriculum framework and exciting and inspiring print and digital learning materials.

The MOETE extends its deep appreciation to its own "Center for Curriculum and Instructional Materials Development" (CCIMD) and specifically, the CCIMD Director and her amazing team. MOETE is also very grateful to the minister's senior advisors and to our partners including "Discovery Education," "Nahdet Masr," "Longman Egypt," UNICEF, UNESCO, and WB, who, collectively, supported the development of Egypt's national curriculum framework. I also thank the Egyptian Faculty of Education professors who participated in reviewing the national curriculum framework. Finally, I thank each and every MOETE administrator in all MOETE sectors as well as the MOETE subject counselors who participated in the process.

This transformation of Egypt's education system would not have been possible without the significant support of Egypt's current president, His Excellency President Abdel Fattah el-Sisi. Overhauling the education system is part of the president's vision of 'rebuilding the Egyptian citizen' and it is closely coordinated with the ministries of higher education & scientific research, Culture, and Youth & Sports. Education 2.0 is only a part in a bigger national effort to propel Egypt to the ranks of developing countries and to ensure a great future to all of its citizens.

WORDS FROM THE MINISTER OF EDUCATION & TECHNICAL EDUCATION

It is my great pleasure to celebrate this extraordinary moment in the history of Egypt where we launch a new education system designed to prepare a new Egyptian citizen proud of his Egyptian, Arab and African roots - a new citizen who is innovative, a critical thinker, able to understand and accept differences, competent in knowledge and life skills, able to learn for life and able to compete globally.

Egypt chose to invest in its new generations through building a transformative and modern education system consistent with international quality benchmarks. The new education system is designed to help our children and grandchildren enjoy a better future and to propel Egypt to the ranks of advanced countries in the near future.

The fulfillment of the Egyptian dream of transformation is indeed a joint responsibility among all of us; governmental institutions, parents, civil society, private sector and media. Here, I would like to acknowledge the critical role of our beloved teachers who are the role models for our children and who are the cornerstone of the intended transformation.

I ask everyone of us to join hands towards this noble goal of transforming Egypt through education in order to restore Egyptian excellence, leadership and great civilization.

My warmest regards to our children who will begin this journey and my deepest respect and gratitude to our great teachers.

Dr. Tarek Galal Shawki
Minister of Education & Technical Education

Contents

How to Use This Guide



The teaching guide is designed to provide instructors with a clear path to follow to implement multidisciplinary instruction that creates engaging, relevant, and rigorous learning experiences for students. If instructors have not used such a guide before, some practical advice follows:

- Read each chapter carefully. Make notes and highlight important details.
- Read and annotate the teacher guide and student book side-by-side.
- Take note of the following:
  - What are the pupils discovering or learning? (Content)
  - What are the students being asked to do? (Activity)
  - What is the teacher discovering about the pupils? (Assessment)
  - How could you adapt the lesson for the different abilities in your class? (Differentiation)
- Gather the necessary materials and make any preparations before implementing the lessons. Materials and preparation are highlighted in boxes at the beginning of each lesson. Consider additional classroom management techniques necessary for your particular class and learning environment.
- During and after implementing each lesson, reflect and make notes on what was successful as well as possible suggestions for improvement.
- Planning with another teacher can often lead to greater implementation success as it provides an opportunity to discuss classroom expectations and management procedures, and it ensures that lessons are differentiated to better suit the needs of students. It is suggested that teachers meet with other instructors at or near their grade level at least weekly to plan and reflect.

As outlined in the **Background**, the school year is divided into four themes. Within the multidisciplinary window, content from various disciplines is integrated into each chapter. In one lesson, students may practice and apply skills in mathematics, social studies, science, and the arts. Each theme includes chapters that coincide with project titles or topics. Projects are used as a means of formative assessment and allow students to demonstrate skills and knowledge across different content domains.

Multidisciplinary chapters are organized into three components:



Discover

- The beginning of each chapter introduces the thematic project to students. Discover allows students to explore what they already know related to the project, create some questions about what they wonder or want to learn, and discover content through observation, questioning, and discussion



Learn

- Content across disciplines is integrated in the Learn portion of the chapter, with a specific focus on preparing for the project. Students practice and apply skills to build and demonstrate understanding.



Share

- At the close of each chapter, students share projects, reflect on the learning process, and provide feedback to classmates.

Background

Building off the success of the initial year of Education 2.0 implementation, these instructional materials support the production of engaging and rigorous learning experiences for students and teachers. The materials are grounded in the philosophy of the Curriculum Framework Second and Third Primary Grades 2019-2030, which aims to develop students with necessary skills for life and work in the 21st century. Four broad themes provide infrastructure for the multidisciplinary curricula.

Term 1:
- Theme 1: Who Am I?
- Theme 2: The World Around Me

Term 2:
- Theme 3: How the World Works
- Theme 4: Communication

Each theme is organized by chapters, with three chapters in each theme. Every chapter begins with an **Overview**, **Learning Indicators**, and **Pacing Guide**. It is strongly suggested that instructors thoroughly read each of these sections because they provide beneficial information about the implementation and purpose of each project.
- The **Overview** provides a description of each component of the chapter as well as the total number of days for implementation.
- The **Learning Indicators** describe what pupils should know or be able to do.
- The **Pacing Guide** shows when each lesson of the chapter will be implemented. It also provides a description of each lesson.

Each theme involves the integration of subjects and includes projects as a means of formative assessment. Projects integrate topics and concepts of the different fields of study through a number of issues and challenges in order to develop a range of knowledge and skills. The project includes a number of individual and group learning experiences that are fully linked to the theme and its goals.

This instructional guide is intended to support teachers in the preparation and implementation of projects by providing step-by-step instructions embedded with teacher input, instructional strategies, and classroom management techniques .

Learn more about Education 2.0



Life Skills

What is the purpose of the life skills?

The Center for Curriculum and Instructional Materials Development at the Ministry of Education has developed important life skills that will guide the development of each child into a creative and innovative citizen. The life skills support the development of citizens who will continue to teach and learn, coexist in harmony with others, and adhere to his/her values. The life skills emphasize becoming an effective leader and positive follower who is proud of his/her country and heritage, who has a competitive spirit and faith in work values, and who is a promoter of the principles of entrepreneurship.

What are the life skills?

The 14 life skills (shown in the diagram below) are based on the Life Skills and Citizenship Education initiative in the Middle East and North Africa (LSCE-MENA), led by UNICEF in collaboration with partners across the region.

The life skills are classified into four learning dimensions:

Learn to Know:
Learning skills (critical thinking, creative thinking, problem solving)

Learn to Do:
Employability skills (cooperation, decision-making, negotiation, productivity)

Learn to Be:
Personal empowerment skills (self-management, accountability, communication, resilience)

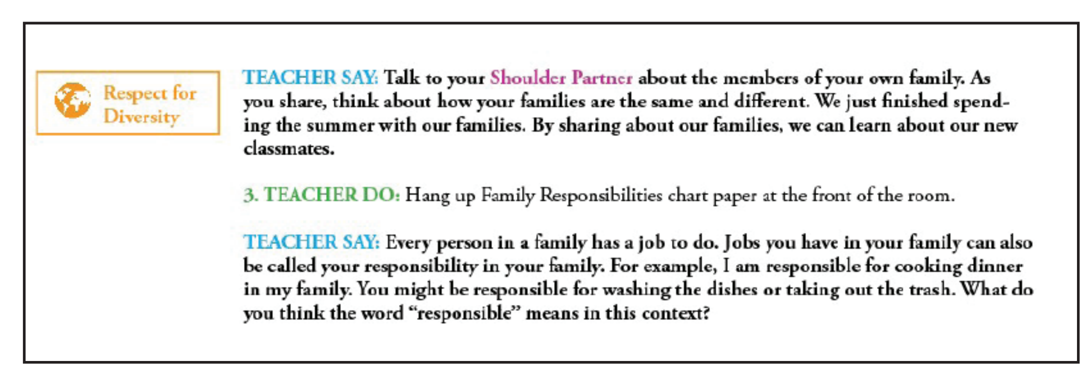
Learn to Live Together:
Active citizenship skills (participation, empathy, respect for diversity)



How are life skills visible in the classroom and instruction?

These skills have already been integrated into the Education 2.0 framework and curriculum at the KG1, KG2, and Primary 1 levels. Life skills are incorporated into the multidisciplinary curriculum alongside the academic learning indicators of math, science, reading, arts, and so on.

With Primary 2, the life skills are deepened and further developed, as students gain maturity and facility for practicing the actions described by each skill. Each lesson of the Primary 2 multidisciplinary curriculum (Discover) calls out specific opportunities for students to practice life skills, indicated by notes to the teachers in the provided teacher guides.



Respect for Diversity

TEACHER SAY: **Talk to your Shoulder Partner about the members of your own family. As you share, think about how your families are the same and different. We just finished spending the summer with our families. By sharing about our families, we can learn about our new classmates.**

3. **TEACHER DO:** Hang up Family Responsibilities chart paper at the front of the room.

TEACHER SAY: **Every person in a family has a job to do. Jobs you have in your family can also be called your responsibility in your family. For example, I am responsible for cooking dinner in my family. You might be responsible for washing the dishes or taking out the trash. What do you think the word "responsible" means in this context?**

Each chapter culminates with a Share project that allows students to not only apply life skills but also to reflect and self-assess how well they are meeting the expectations of relevant skills.

Life Skills	Gives feedback that is general.	Gives feedback that is specific and relevant to the work.	Gives thoughtful feedback that is specific and relevant to the work and may offer a unique perspective.
	Listens to and respects others' opinions when frequently reminded, or talks over others to state own opinions.	Listens to and considers others' opinions in classroom discussions.	Listens to, considers, and voluntarily asks for others' opinions in classroom discussions.

Primary 2 First Term Pacing Calendar



- A Day in My Life — Days 1-10
- Taking Care of Me — Days 11-20
- When I Grow Up — Days 21-30

THEME 2:
THE WORLD AROUND ME

- What Is in the Night Sky? — Days 31-40
- Helping My Habitat — Days 41-50
- Monumental Designs — Days 51-60

Primary 2 Pacing Guide

	WEEK	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY
WHO AM I?	1	DISCOVER A Day in My Life	DISCOVER A Day in My Life	DISCOVER A Day in My Life	LEARN A Day in My Life	LEARN A Day in My Life
	2	LEARN A Day in My Life	LEARN A Day in My Life	LEARN A Day in My Life	SHARE A Day in My Life	SHARE A Day in My Life
	3	DISCOVER Taking Care of Me	DISCOVER Taking Care of Me	DISCOVER Taking Care of Me	LEARN Taking Care of Me	LEARN Taking Care of Me
	4	LEARN Taking Care of Me	LEARN Taking Care of Me	LEARN Taking Care of Me	SHARE Taking Care of Me	SHARE Taking Care of Me
	5	DISCOVER When I Grow Up	DISCOVER When I Grow Up	DISCOVER When I Grow Up	LEARN When I Grow Up	LEARN When I Grow Up
	6	LEARN When I Grow Up	LEARN When I Grow Up	LEARN When I Grow Up	SHARE When I Grow Up	SHARE When I Grow Up
THE WORLD AROUND ME	7	DISCOVER What is in the Night Sky?	DISCOVER What is in the Night Sky?	LEARN What is in the Night Sky?	LEARN What is in the Night Sky?	LEARN What is in the Night Sky?
	8	LEARN What is in the Night Sky?	LEARN What is in the Night Sky?	SHARE What is in the Night Sky?	SHARE What is in the Night Sky?	SHARE What is in the Night Sky?
	9	DISCOVER Helping My Habitat	DISCOVER Helping My Habitat	LEARN Helping My Habitat	LEARN Helping My Habitat	LEARN Helping My Habitat
	10	LEARN Helping My Habitat	LEARN Helping My Habitat	LEARN Helping My Habitat	LEARN Helping My Habitat	SHARE Helping My Habitat
	11	DISCOVER Monumental Designs	DISCOVER Monumental Designs	LEARN Monumental Designs	LEARN Monumental Designs	LEARN Monumental Designs
	12	LEARN Monumental Designs	LEARN Monumental Designs	LEARN Monumental Designs	SHARE Monumental Designs	SHARE Monumental Designs

Instructional Strategies

The instructional strategies described below are woven throughout the teacher guide. These are not meant to be the only methods used in the classroom, rather are highlighted as best practices for engaging students in active, inquiry-based learning. As teachers and students gain familiarity with the strategies, instructors may wish to modify and personalize to suit the needs of each individual classroom.

For more strategies visit: tinyurl.com/Edu2-0strategies



INSTRUCTIONAL STRATEGY NAME	BRIEF DESCRIPTION
2 Stars and a Wish	This strategy is used to help students give positive feedback to peers. Two stars are two things the student likes about the work that is being assessd. One wish is a suggestion to improve upon that work.
Ask 3 Before Me	Students ask three peers for assistance before asking the teacher. This strategy is used when students are working collaboratively to develop communication skills, encourage peer interactions, and decrease reliance on the teacher's support in large classrooms.
Attention-Getting Signal	The teacher uses an explicit signal to get the attention of the class when they are talking in pairs or working in groups. There are many options for signals, and more than one can be used as long as students recognize it. Options include a clap pattern that students repeat, a simple call and response phrase, or a hand in the air (see: Hands Up). This strategy allows teachers to ask for students' attention without shouting or immediately disrupting student conversations.
Brainstorm	Students provide multiple answers for an open-ended question. This can be done as a whole class or in groups or pairs. The purpose of a brainstorm is to list many answers, not to critique whether answers are realistic, feasible, or correct. Once an initial broad list is made, students can go back to answers to prioritize or eliminate some options. This strategy promotes creativity and problem-solving.
Calling Sticks	Teacher writes the names of students on popsicle sticks and places them in a can/jar. To call randomly on students, the teacher pulls a stick from the jar. After calling on the student, the teacher places that stick into another can/jar so that student is not immediately called on again. This strategy helps teachers call on a wide variety of students and encourages all students to be ready with an answer.
Count Off	Teacher breaks students into groups by having students count off to a certain number. It is important to tell students to remember their number. For example, if the teacher wants three groups, the first student counts one, the next student says two, the next say three, and the next student starts over at one, and so on. When all students have counted, tell all the number ones to meet together, all the number twos, and then all the number threes. This strategy enables time-efficient grouping and reinforces conceptual number use.

INSTRUCTIONAL STRATEGY NAME	BRIEF DESCRIPTION
Fishbowl	Students gather around a teacher or group of students who are modeling something new. The students observe carefully as if they are watching fish in a bowl. This strategy promotes the full attention of students even when individual students are not actively participating in the demonstration.
Four Corners	Each of the four corners of the room corresponds to a possible opinion about a thought-provoking statement. The teacher may post a picture or a prompt in each corner of the room to represent the opinions/statements. Students walk to the corner that interests them or expresses their opinion to group with other like-minded students. This strategy allows students to express opinions and to prepare justifications with others who agree before presenting to the class.
Gallery Walk	As if in a museum, students walk past displays and respond to questions or prompts about the display. This strategy can be used in multiple ways, including to consider ideas posted on chart paper around the room or to view classmates' final products. This strategy encourages diversity of thought. When used at the end of a project, this strategy allows students to celebrate and take pride in their work while also honoring and responding to others' work.
Hands Up	The teacher holds a hand in the air to signal that students should stop what they are doing, stop talking, and look up at the teacher. When students notice the teacher's hand up, they also raise a hand to signal to classmates. This strategy is used as an attention-getting signal.
Hands Up, Pair Up	Students stand and walk around the room quietly with one hand raised in the air. The teacher says, "Stop—Pair Up." Students clap hands and stand together with a nearby student. Anyone with a hand still up needs as a partner. Students can easily find each other and pair up.
I Do, We Do, You Do	I Do: Teacher demonstrates or models an action to take place, such as reading a passage to the students. We Do: Students repeat the action with the teacher, such as re-reading a passage in unison. You Do: Student practices the learned action without the guidance of the teacher. This strategy supports students by modeling an expectation, allowing for low-pressure practice, then providing opportunities for independent practice.
I See Very Clearly	The teacher tells students he/she sees something. Students guess what it is as the teacher gives students clues. Students use observation and listening skills to guess the correct object. This strategy emphasizes the use and identification of object properties and characteristics.
Imagine That	The teacher describes a person, animal, plant, or situation for students to act out. Students imagine that they are the living thing or are in the situation and act out what happens. This can also be done in groups with a student, or rotating students, acting as the leader. This strategy promotes imagination and long-term memory. (See also: Charades to add a guessing element.)
Lean and Whisper	Students lean one shoulder in toward one neighbor to answer a question that has a one- or two-word (or short) answer. This strategy engages all students in answering a question without disrupting the flow of the classroom. This is used for KG1 students as a specific type of the Shoulder Partner strategy.
Model	The teacher or student demonstrates exactly how to complete a task. The rest of the class can ask questions before repeating what was demonstrated. This strategy allows the teacher to review any safety concerns or difficult aspects of a task, as well as share advice for task completion. This method should not be used for some inquiry activities, as it could over-influence the direction of student thinking.

INSTRUCTIONAL STRATEGY NAME	BRIEF DESCRIPTION
Number Sign	The teacher can check for understanding quickly by asking a question and giving students a choice of answers. Students hold up one, two, or three fingers in response to the question asked. The teacher quickly scans the fingers raised to get a sense of how many students are tracking the material.
Numbered Heads Together	This is a cooperative strategy that holds each member of a group accountable for learning/ discussing material. Each student in the group is given a number. The teacher poses a question to the group. Students put their heads together to discuss the answer. The teacher then calls a number to identify a "spokesperson" to share the group's answer.
On the Fence	Each of the two sides of the room corresponds to a possible opinion about a thought-provoking statement. The teacher may post a picture or a prompt on each side of the room to represent the opinions/statements. Students walk to the side that interests them or expresses their opinion to group with other like-minded students. Students may also stay "on the fence" in the middle of the room if they are undecided. Students debate their opinion with evidence to persuade others in the room to agree with them. As students change their minds, they move to the corresponding area in the room.
One Stay One Stray	After working with partners, one person stays with the work product to present to other students while the second partner walks around and listens to peers in the class share. Then the two students switch roles. Using the strategy, both partners get to share their project and listen to others share.
Pass the Pen	Students work collaboratively in a group with one pen or pencil per group. The teacher poses a question or topic to groups. One student writes down an idea or answer, then passes the pen to the next group member. The pen continues to be passed around, allowing all students an opportunity to write at least once or twice. The strategy is used to brainstorm or activate prior knowledge on a topic and is helpful for encouraging all students to participate and share ideas.
Popcorn	Call on one student to answer a question. After the student has answered the question, they say "popcorn" and say the name of another student. It is now the turn of that student to answer the question, then pick a new student, and so on. If a student has responded, they should not be called upon a second time during the same Popcorn activity.
Relay Race	Divide the class into teams and have them line up single file. Call one student from each team to the front of the class. Ask students a question and the first to answer receives a point for their team. After answering, the student goes to the end of the line and the next student goes to the front of the room. A variation for math problems is for students to complete only one part of a math problem at a time.
Shake It Share It High Five	Students move around the classroom until the teacher signals to stop. Students then partner with a nearby student. Partners shake hands, share ideas or work products, then high five before moving around again to find a new partner. This strategy gets students out of their seats and moving, while also allowing them to share with classmates they do not sit near.
Shoulder Partners	Students lean and talk quietly with the person sitting next to them. Shoulder Partner can be used literally to just talk to the people sitting on either side, or it can be used for slightly larger groups of three or four with everyone's shoulders "touching." (This promotes the ability to speak softly—in sort of a huddle).
Snowball Fight	Students respond to a prompt using a half sheet of paper. The student crumples the paper up like a snowball and tosses it across the room. Students pick up a snowball that lands close to them, add their comment or answer, and crumple to toss again. Repeat as needed. The strategy encourages students to interact with the ideas of students who do not sit nearby in an anonymous manner.

INSTRUCTIONAL STRATEGY NAME	BRIEF DESCRIPTION
Think Aloud	The teacher models a process of thinking by speaking aloud what is thought. As an example, "I think I need more color here in my drawing." This strategy models for students the type of thinking they can use in an upcoming activity.
Think Time	Teacher allows a distinct period of silence so that students can process tasks, feelings, and responses. Allow students 15 to 30 seconds to think to themselves before calling on anyone to provide an answer to the class. This strategy is particularly helpful for shy or quiet students, as well as students who prefer to process content individually before contributing to a classroom or group conversation.
Thumbs Up	The teacher can quickly check for understanding using this strategy. Students hold thumbs up for agreement and thumbs down for disagreement to a question asked by the teacher. Thumbs up can also be used as a way for students to signal to a teacher that they are ready for an instruction.
Turn and Talk	Students turn "knee to knee" and "eye to eye" with a Shoulder Partner to discuss answers to long-form questions. This strategy allows students to discuss ideas, reflect on learning, and check each other's answers. This is used for KG1 students as a specific type of the Shoulder Partner strategy.
Venn Diagram	Teacher draws two or more large overlapping circles as a graphic organizer to show what is the same and different about multiple topics. Teacher notes similarities in the overlapping section of the circles, then summarizes differences in the respective parts of the circles that do not overlap. This strategy allows students to visually see and record similarities and differences.
Wait Time	Similar to the Think Time strategy, the teacher waits at least seven seconds after asking a question to the whole class or after calling on a student to respond. This provides time for students to think independently before an answer is given out loud.
Whisper	The teacher can provide whole class verbal processing time by allowing students to respond to a question by whispering the answer into their hands. This strategy prompts every student to attempt an answer, with no social-emotional recourse if their answer is wrong.
Zoo Can	Similar to Calling Sticks, the teacher pulls a name stick from the can and the students must count backward while acting like an animal. This can be used for relevant content instruction or as a quick break when students need to move and laugh before finishing a task or moving on to a new task.

Rubrics for Teacher and Student Use

What is a rubric?

A rubric is a tool used by teachers to help assess student work and ability based on established criteria. Rubrics help describe what a student can do based on expected outcomes.

Why do we use rubrics?

Rubrics describe various levels of performance and offer teachers a way to look closely at what students are able to do and highlight areas that need improvement. They are meant to define exactly what learning is expected and are a helpful way to assess students on class work that may not have discrete "correct" answers. Rubrics can also be valuable when discussing student achievement with students and their families.

How are the rubrics organized?

The rubrics found in this curriculum are organized around three priorities: Academic Content, Quality of Performance, and Life Skills.

Academic Content refers to what the students are learning and will often directly reference specific academic standards.

Quality of Performance refers to how the work is presented and may include qualities like neatness, clarity of voice, or organization.

Life Skills refers to abilities that help to make students more successful in life such as collaboration, task management, and respect for others.

Rubric Assessment (for teacher use)

	Approaching Expectation (1)	Meeting Expectation (2)	Exceeding Expectation (3)
Academic Content	Describes how compromise is used to solve a problem in the play with help.	Describes how compromise is used to solve a problem in the play.	Describes how compromise is used to solve a problem in the play and offers an alternative solution not already included in the play.
	Contributes to a script, props, or scenery that are not well matched to the topic of the play.	Contributes to a script, props, or scenery that are appropriate to the topic of the play.	Creatively contributes to a script, props, or scenery that match and enhance the topic of the play.
Quality of Performance	Speaks in a voice that may be difficult to hear and does not use expression and/or body language.	Speaks in a clear voice, with expression and body language appropriate for the scene.	Speaks in a clear voice, with expression and body language that enhances the scene.
	Creates props or scenery that are messy.	Creates props or scenery that are neat and well constructed.	Creates unique props or scenery that are neat, well constructed, and help to enhance the story.
Life Skills	Gives feedback that is general.	Gives feedback that is specific and relevant to the work.	Gives thoughtful feedback that is specific and relevant to the work and may offer a unique perspective.
	Listens to and respects others' opinions when frequently reminded, or talks over others to state own opinions.	Listens to and considers others' opinions in classroom discussions.	Listens to, considers, and voluntarily asks for others' opinions in classroom discussions.

These three areas are found in both the teacher and student rubrics.

In the **student rubrics**, there is only one descriptor for each of the three areas. This helps keep students from becoming overwhelmed by the tool and allows them an opportunity to self-assess. The student rubric offers students a clear picture of what is expected and shows tangible ways to improve.

In the **teacher rubrics**, there are multiple descriptors in each of the three areas. This allows for the assessment of a variety of skills that are demonstrated in complex projects. Two important notes:

- **The skills (rows) are assessed independently of each other.** In other words, students are assessed as meeting the description in column 1, 2, or 3 for each row. This helps teachers be more specific about each student's strengths and areas for improvement.
- Each section reflects the major content demonstrated in the Share project. It does not represent every single learning indicator addressed in each chapter.

How do we use the rubrics?

Students are introduced to the rubric prior to beginning the Share project near the end of each chapter. Teachers should review the project topic and goals and focus students on the opportunity to "meet expectations" using the rubric provided. Each time students begin the Share project, the class will review the rubric together. Each time students complete the Share project, students will individually reflect using the student rubric, and teachers will assess each student using the provided teacher version in each student book.

The rubrics found in this curriculum are set up on a three-point scale. The goal for students is to fall into the '2' column, meaning that they have met the expectation. Mistakes or minor misconceptions are allowed in the '2' category, but they should be minimal and must not interfere with the student's ability to show clear understanding. The '3' column is included because there will be times when students exceed the expectations. A '3' does not mean that the student work is perfect or mistake-free, rather it means that the student is able to express their understanding in a unique way or show application of the skill or knowledge in another setting. The descriptors found in this column help give teachers a clearer picture of what students can do to go above and beyond the expectation. If a student needs extra support or is unable to meet expectations independently, they will often fall in the '1' column.

When scoring a student, it is possible that their work will match descriptors in all three columns. If a student scores a '3' on one descriptor, that does not mean they have earned a '3' in all others. Each descriptor should be assessd separately.

Formative Assessment

What is formative assessment?

The term assessment often brings to mind exams. Exams can be effective at summarizing learning. After a student learns material for a certain amount of time, an exam measures how much the student has learned, retained, and can apply. Formative assessment encompasses strategies used in the classroom to find out if and how much students are learning along the way, so that instruction can be adjusted.

Why embed formative assessment in instruction?

Formative assessment is a tool that supports responsive teaching. Embedding formative assessment provides teachers with evidence about how much students are learning, retaining, and applying. A teacher who frequently seeks and receives feedback from students about how much progress they are making toward learning goals can adjust instruction to respond to misconceptions, misunderstandings, and gaps in students' ability to apply learning.

How does embedding formative assessment improve learning?

The following table (Wiliam, 2011) provides an overview of five strategies that teachers, peers, and students can use to give and receive evidence of learning throughout the learning process.

<table>
<tr><th></th><th>WHERE THE LEARNING IS GOING</th><th>WHERE THE LEARNER IS RIGHT NOW</th><th>HOW TO GET THERE</th></tr>
<tr><td>Teacher</td><td rowspan="3">Clarifying, sharing, and understanding what we intend for students to learn and the criteria for success</td><td>Eliciting evidence of learning</td><td>Providing feedback that moves learning forward</td></tr>
<tr><td>Peers</td><td colspan="2">Activating learners as instructional resources for one another</td></tr>
<tr><td>Learner</td><td colspan="2">Activating learners as owners of their own learning</td></tr>
</table>

Wiliam, Dylan. *Embedded Formative Assessment.* Bloomington: Solution Tree Press, 2011.

The first essential step is to identify (and share with students) the desired learning outcomes, or "where the learning is going." Once learning goals are established, teachers, peers, and students themselves can check in on "where the learner is right now," or how much progress is being made toward the goals. Rather than assessing whether or not a student has sufficiently learned content after the fact, formative assessment practices provide feedback so that teaching and learning ("how to get there") can be adjusted to better obtain the agreed-upon goals.

What does embedding formative assessment look like in the classroom?

Formative assessment often occurs through classroom discussions and tasks that ask students to explain and justify their thinking. If individual students struggle to understand or apply a concept, a teacher can differentiate instruction or provide peer support to meet that students' needs. When many students exhibit evidence of misunderstanding or gaps in knowledge or skills, a teacher can decide to review, reteach, or present a new approach to achieving the learning goals.

Lesson Preparation Template for Education 2.0

Grade (P1) Class: ________ Date: ________ Present: ________ Absent: ________ Students' total number: ________

Content / Windows	Theme	Chapter	Lesson	Learning outcomes	Activities	Teacher's Choices						
						Teacher guide Pages	Teaching strategies	Questions/ Modeling	Digital esources	Differentiation / Challenges	Maths Journal	Enrichment

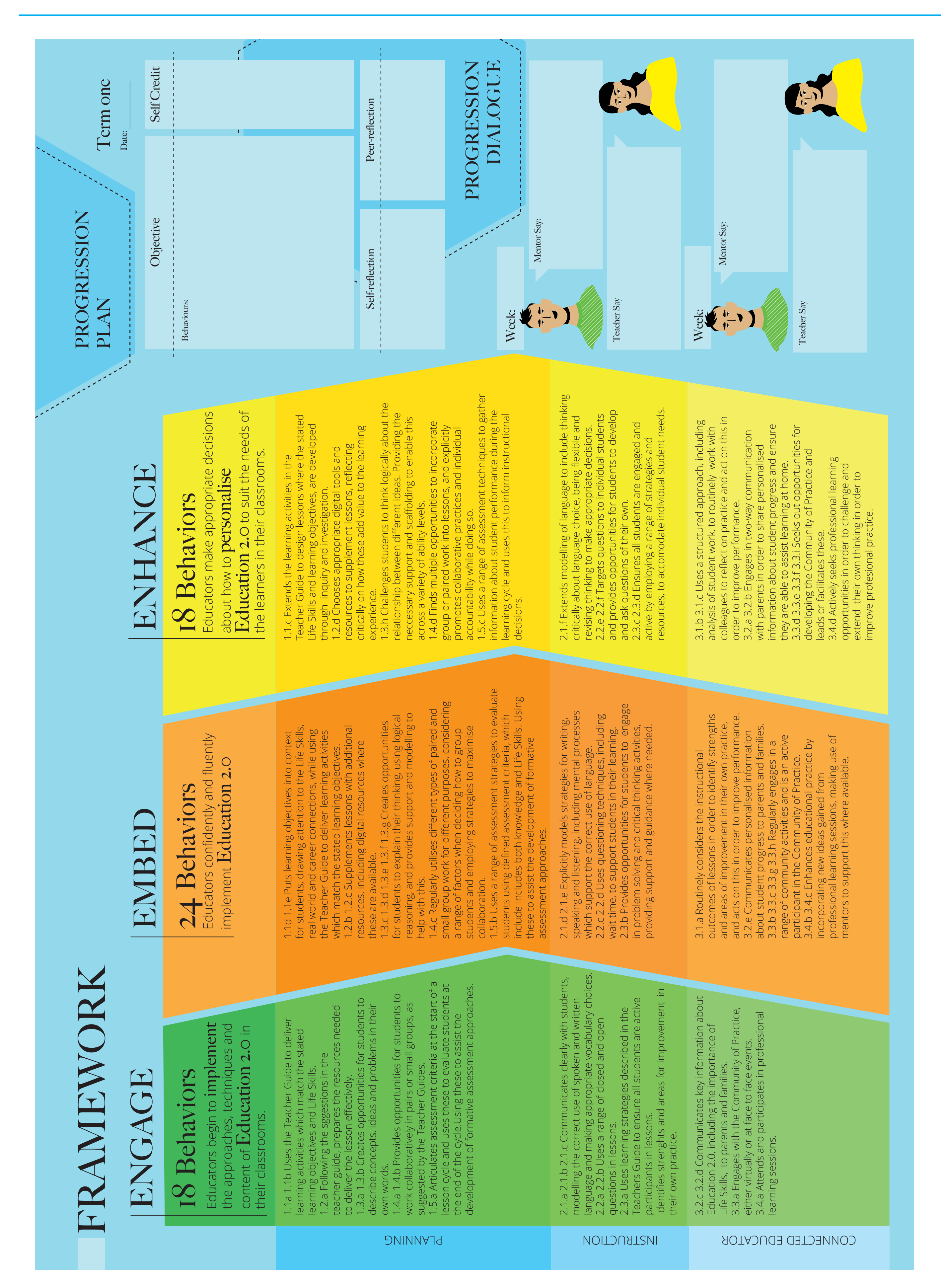
Teacher's Self Reflection: ☐ Exceeds expectations ☐ Meets expectation ☐ Sometimes Meets Expectations ☐ Below Expectations

Grade (P1) Class: ________ Date: ________ Present: ________ Absent: ________ Students' total number: ________

Content / Windows	Theme	Chapter	Lesson	Learning outcomes	Activities	Teacher's Choices						
						Teacher guide Pages	Teaching strategies	Questions/ Modeling	Digital esources	Differentiation / Challenges	Maths Journal	Enrichment

Teacher's Self Reflection: ☐ Exceeds expectations ☐ Meets expectation ☐ Sometimes Meets Expectations ☐ Below Expectations

Teacher Framework



Progression Plan and Dialogue Template

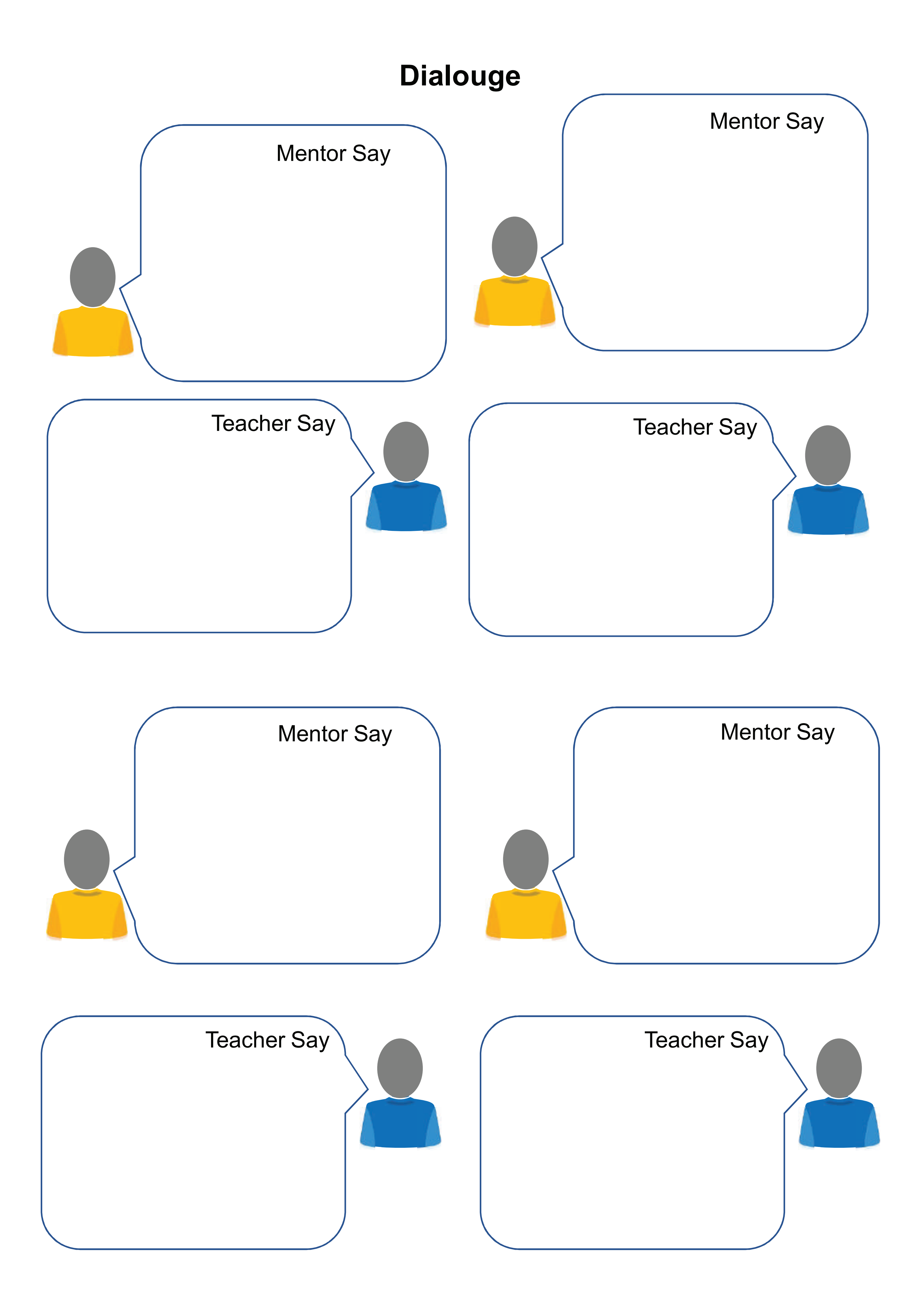
Progression Plan

Credits	Objective	Credits	Objective

Self Reflection	Peer Reflection	Self Reflection	Peer Reflection

Credits	Objective	Credits	Objective

Self Reflection	Peer Reflection	Self Reflection	Peer Reflection


Dialouge
Mentor Say
Mentor Say
Teacher Say
Teacher Say
Mentor Say
Mentor Say
Teacher Say
Teacher Say

Digital Resources Available For Use

Teachers are encouraged to use resources from the Egyptian Knowledge Bank as digital learning objects. Visit **www.ekb.eg** to access thousands of resources from the world's top education publishers.

NO.	CLIP TITLE	DESCRIPTION	CLIP TITLE	QR CODE
1	**Styles of Communication**	Students consider different purposes for communication, and how communication customs differ depending on who is in the conversation.	https://tinyurl.com/y5pu642y	
2	**Cultural Differences**	Students explore how customs and traditions differ between different places, people, and cultures.	https://tinyurl.com/yyppccbj	
3	**Map of Egypt**	Students explore features and regions showcased on a map of Egypt.	https://tinyurl.com/y3azq69y	
4	**Citizenship**	Students consider how citizenship, or being a member of a community, includes having rights and responsibilities to care for others and the community itself.	https://tinyurl.com/y2oefw5d	
5	**Observing and Measuring Types of Weather**	Students consider how different types of weather, such as rainfall, temperature, and wind direction, can be measured.	https://tinyurl.com/y38mtnmu	
6	**A Tour along the Nile**	Students explore various areas along the Nile River on a virtual tour, noting key current and historical sites.	https://tinyurl.com/y6p85t4s	
7	**Daily Routines**	Students explore the importance of daily schedules for accomplishing goals and working together. The video also reinforces the skill of reading 12-hour clocks to mark time in a 24-hour day.	https://tinyurl.com/y2wjvxot	

NO.	CLIP TITLE	DESCRIPTION	CLIP TITLE	QR CODE
8	**Communication Tools**	Students learn about different tools we use for communication, including simple tools such as light and sound and more complex tools such as phones and computers.	https://tinyurl.com/y2wjvxot	
9	**Nutrition**	Students learn how various types of food provide health benefits and explore how to create a balanced meal.	https://tinyurl.com/y33kzone	
10	**Engineering Design Process**	Students observe examples of partners engaging in the design process, including encountering a challenge, generating ideas, building and testing prototypes, and making improvements.	https://tinyurl.com/y6hwzjol	
11	**Uses of Water**	Students consider many ways that we use water throughout the day, and begin to explore various sources of water available around the world, and the importance of protecting these sources from pollution.	https://tinyurl.com/yy2e8646	
12	**Conflict Resolution**	Students observe an example of conflict between friends and learn strategies for responding in ways that preserve relationships and help groups work together.	https://tinyurl.com/y6mo9e5p	
13	**Intro to Careers**	Students explore how their personal interests can relate to potential future careers.	https://tinyurl.com/yynjov34	
14	**Habitats and Organisms**	Students learn that a habitat is the environment and surroundings that make a natural home for living things, and explore how even a place like the desert can be a habitat for plants and animals.	https://tinyurl.com/y3nbwpbx	

NO.	CLIP TITLE	DESCRIPTION	CLIP TITLE	QR CODE
15	**Constellations**	Students learn about what is visible in the night sky, including planets and stars. Students begin to consider the distance, size, and brightness of stars, as well as patterns that people see among the stars.	https://tinyurl.com/y6rtg7h3	
16	**Water**	Students explore various sources of water on our planet and learn that water sources can be solid or liquid and fresh water or saltwater.	https://tinyurl.com/yylrrpfl	
17	**Cooperation, Participation**	Students observe examples of how we can accomplish more together when we participate in group activities and cooperate to finish tasks.	https://tinyurl.com/y5m4vjf9	
18	**External Animal Parts**	Students explore how different parts of plants and animals help them adapt to their habitat.	https://tinyurl.com/y2566f34	
19	**Being Kind Online**	Students consider how communication online differs from communication in person, including neessary safety measures and the potential for misunderstanding without the context that in-person communication provides.	https://tinyurl.com/y4at9867	
20	**Heating and Cooling**	Students observe and explore what happens to water and other materials when heated or cooled, focusing on the resulting changes in the states of matter.	https://tinyurl.com/y483ann2	

PRIMARY 2

Multidisciplinary

WHO AM I?

Chapter 1: A Day in My Life

Theme Overview

A Day in My Life

COMPONENT	DESCRIPTION	LESSONS
Discover	Students discover family structures and roles, as well as common challenges that might be encountered day to day. Students explore how families can help solve problems and what it means to cooperate in the classroom.	3
Learn	Students learn what it means to be a good citizen, effective time management skills, and conflict resolution strategies. Students practice collaborating in a group to write a script for a play.	5
Share	Students collaborate to create a play that demonstrates a problem from their daily life and how they solved it.	2

Connection to Issues



Non-Discrimination: We are all alike, and yet we have differences. We can appreciate and talk about how we are the same and different. We can work together and be cooperative and collaborative.

Citizenship: We belong. We are part of our communities, country, and the human family. We all have rights and we all have responsibilities.

Life Skills Addressed



DIMENSION	DESCRIPTION
Learn to Know	**Problem Solving:** • Analyze the parts of the problem.
Learn to Live Together	**Respect for Diversity:** • Solicit and respect multiple and diverse perspectives to broaden and deepen understanding. **Empathy:** • Demonstrate empathy in communicating with others. **Sharing:** • Effective management and organization of tasks.
Learn to Work	**Collaboration:** • Review individual behaviors within the team. • Respect for other opinions. **Productivity:** • Setting clear goals.
Learn to Be	**Self-management:** • Segment goals into specific steps. **Accountability:** • Provide effective feedback. **Communication:** • Good listening. • Self-expression. • Reading, writing, non-verbal communication skills.

Learning Indicators

Throughout this chapter, students will work toward the following learning indicators:

READING:

E. Reading Comprehension: Literature

1.a. Ask and answer questions (who, what, when, where, why, and how) about key details in a text.
1.b. Describe how characters in a story respond to major events and challenges.
3.a. Determine how words and phrases can convey different emotions (sadness, joy, anger, surprise, fear).

WRITING:

A. Foundational Skills

1.a. Write complete sentences.
1.b. Arrange images to create a story and orally recount the story.

B. Narrative

1.a. Write narratives which recount a well-elaborated event or short sequence of events.
1.b. Include details in a narrative to describe actions, thoughts, and feelings.
1.c. Arrange events sequentially in a story and use temporal words to signal event order.
1.d. Provide a sense of closure.

D. Process, Production, and Research

1.a. Use graphic organizers to plan writing.
1.b. Utilize questions and suggestions from peers to strengthen writing.
1.c. With guidance and support, review and revise personal writing to strengthen it.

SPEAKING AND LISTENING:

A. Foundational Skills

1.a. Participate in collaborative conversations with peers and adults about various topics and texts.
1.b. Follow agreed-upon rules for discussions.
1.c. Build on others' talk in conversations by linking their comment to the remarks of others.
1.d. Ask questions to clarify any misunderstandings concerning the topics and texts under discussion.
2.a. Tell a story or recount an experience in complete sentences with appropriate facts and relevant, descriptive details.
4.a. Use intonation, facial expressions, and body language to express feelings and thoughts appropriate to the situation.

MATH:

B. Operations and Algebraic Thinking

1.b. Fluently add and subtract within 20 using mental strategies.

D. Measurement and Data

3.a. Tell and write time from analog and digital clocks to the nearest hour, half-hour, and quarter-hour using a.m. and p.m.
3.b. Explain that a day equals 24 hours.
4.a. Organize data with up to four categories into scaled bar and pictographs (scales limited to 2, 5, 10).
4.b. Solve simple put-together, take-apart, and compare problems using data presented in a bar graph or pictograph.

SCIENCES:

A. Skills and Processes

1.c. Use observations to describe patterns.
1.d. Use observations to explain an experience.
1.e. Differentiate between opinion and evidence.

SOCIAL STUDIES:

A. Citizenship

1.a. Demonstrate behaviors associated with responsible citizenship (such as respect, fairness, honesty, and loyalty).
1.b. Describe how making choices affects self, family, school, and community.
1.c. Analyze how compromise between people with different points of view can avoid conflict.

D. Human Systems

1.a. Describe ways that individuals and groups meet basic human needs.

VISUAL ART:

A. Producing Visual Art

2.a. Use various drawing and coloring tools to create art.
2.b. Create art that explores personal interests, questions, and curiosity.
2.f. Collaborate to produce art with peers.

B. Presenting Visual Art

1.a. Present or display artwork produced by student and discuss the work with peers.
1.c. Participate in producing and displaying a work of art (individually or collectively) relating to current events in home, school, or community life.

DRAMA:

B. Plays

2. Collaborate with peers to devise meaningful dialogue in an original play.
3. Contribute ideas and make decisions as a group to advance a story.
4. Collaborate with peers to imagine relevant scenery for a play.

ECONOMICS AND APPLIED SCIENCES:

A. Family Relationships and Safety in the Community

1.a. Explain the role of different family members.
1.b. Identify ways of getting help from family members for making decisions and solving problems.
2.a. Express positive attitudes toward self and others.
2.b. Describe how family, peers, and friends can influence behavior positively and negatively.

B. Childhood Development

2.a. Identify rights within the family and society (such as the right to shelter, play, and entertainment).
2.b. Demonstrate respect for personal and others' belongings.

D. Managing Individual and Family Resources and Rationing Consumption

1.c. Identify uses of house tools and machines.

VOCATIONAL FIELDS

A. Career Social Skills and Preparation

1.a. Identify how to cooperate at both home and school.
1.b. Work cooperatively with another student to accomplish a task.
1.c. Explain and demonstrate the group interaction terms participate and cooperate.

INFORMATION AND COMMUNICATION TECHNOLOGIES:

B. Security and Safe Use

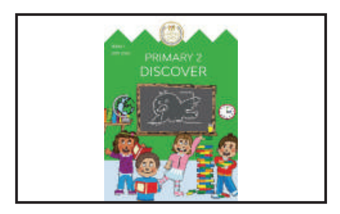
1.a. Demonstrate safe and proper handling and storage of devices.
1.b. Demonstrate responsible use of technology (such as setting up protection like a password and carrying devices safely).
1.c. Explain ethics and safety issues in using electronic media at home or school.

CH 1 Pacing Guide

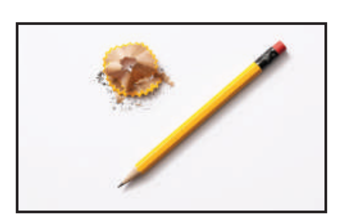
LESSON	INSTRUCTIONAL FOCUS
1	**DISCOVER: Students will:** • Discover the scope of the final Share project. • Describe family structures. • Compare students' family structures. • Identify students' responsibilities in a family.
2	**DISCOVER: Students will:** • Identify how to cooperate with family members at home. • Read and answer questions about stories that describe everyday life and how problems are solved. • Respond to a story to make a connection to a character. • Describe choices made by characters in a story.
3	**DISCOVER: Students will:** • Identify ways students cooperate with others at school. • Identify problems with peers encountered at school. • Describe how others can have positive and negative impacts on our behavior.
4	**LEARN: Students will:** • Describe what it means to be a good citizen. • Analyze behavior in terms of good citizenship. • Categorize daily behaviors.
5	**LEARN: Students will:** • Observe patterns in their daily routines. • Identify and describe choices made in daily life. • Analyze how they make choices.
6	**LEARN: Students will:** • Practice telling and writing time to the hour and half hour. • Identify strategies to effectively manage time.
7	**LEARN: Students will:** • Identify conflict resolution skills to solve problems. • **Role Play** using conflict resolution skills.
8	**LEARN: Students will:** • Review the student rubric for the Share project. • List the parts of a play. • Collaborate to write a short play.
9	**SHARE: Students will:** • Rehearse a short play in groups. • Create props and scenery relevant to the plot of the play. • Offer feedback to peers.
10	**SHARE: Students will:** • Perform a play demonstrating a problem and solution from daily life. • Share performances with another school in Egypt (optional).

Materials Used

Student book



Pencil



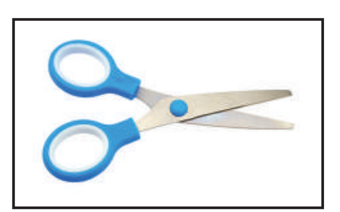
Clock and/or digital timer



Chart paper, whiteboard, or clock model



Scissors



Music player (tape player, tablet, or phone)

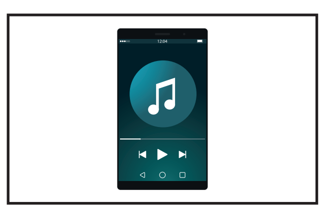


Chart paper with two vertical columns labeled peace makers and peace breakers

Markers



Pre-made charts



Bell



Chart paper with graphic organizer, planning a play

Paint brushes



Paper plates



Large drawing paper



Paint



Aluminum foil



Paper tubes

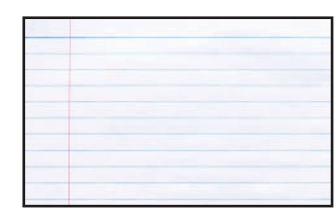


Recyclable materials

Computers



Lined paper for computing scripts



Colored paper



Glue



Fabric



Timer or timing device on phone



Student-created props and scenary

Citizenship paper

Timeline



Lesson 1 Overview

LEARNING OUTCOMES

Students will:
- Discover the scope of the final Share project.
- Describe family structures.
- Compare students' family structures.
- Identify students' responsibilities in a family.

PREPARATION

Create a chart titled: Family Responsibilities. Also create a T-Chart with two columns. Title one column: Responsibility. Title the other column: How Many?

KEY VOCABULARY

- Responsibility

LIFE SKILLS

Learn to Live Together

Respect for Diversity:
- Solicit and respect multiple and diverse perspectives to broaden and deepen understanding.

MATERIALS

- Blank chart paper
- T-Chart on chart paper
- Student book
- Pencils
- Crayons



Discover (90 minutes)

Directions

1. Introduction: Use the start of every chapter to announce the new topic, relate it to students' lives, and introduce the Share project that the chapter builds toward.

This is a time to excite your students about the chapter. Tell them they are beginning a chapter of study called, "A Day in My Life."

TEACHER SAY: **Welcome to a new class and a new year. This class might feel a bit different than your other classes. Instead of talking about one subject like math or reading, we will be learning about big topics—using all the subjects that will help us along the way. Today we are starting a unit of study called "A Day in My Life." What do you think we might learn?**

TEACHER DO: Use **Calling Sticks** to choose three students to answer the question before continuing.

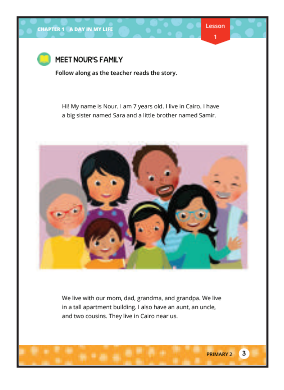
 STUDENTS DO: Predict what they will learn.

TEACHER SAY: **We will be learning about ourselves and our roles within our families and at school. We will learn how people make choices daily and how they solve problems. At the end of each chapter in this class, you will complete a project to share what you have learned. At the end of this chapter, you will create a play with your peers to show how you can work together to solve everyday problems.**

TEACHER DO: Distribute student books as you introduce how they will be used.

TEACHER SAY: **This student book will help us remember what we learn. When we are finished with the student book, we will be able to share it with our families.**

2. TEACHER SAY: **Now, turn your student book to the page Meet Nour's Family. Nour is a girl in Primary 2 just like you. She is going to help us as we learn throughout the chapter. Follow along as I read.**



TEACHER DO: Read the story in the student book aloud to the class.

Note to Teacher: Depending on student literacy levels, you can adjust how the story is read. Consider having students read the story in small groups or having a few proficient readers read aloud to the class.

TEACHER SAY: Thank you for following along as I read. To think more about this story, we are going to talk to a Shoulder Partner. When you talk to a Shoulder Partner, you should turn and face your partner and take turns sharing your ideas. Make sure you are using soft voices while you share, and listen carefully to your partner. We will be using Shoulder Partners throughout our school year. In this story, we heard about the members of Nour's family. Turn to a Shoulder Partner to name the family members.

 **STUDENTS DO:** With a partner, name the family members from the story.



TEACHER SAY: Talk to your Shoulder Partner about the members of your own family. As you share, think about how your families are the same and different. We just finished spending the summer with our families. By sharing about our families, we can learn about our new classmates.

3. TEACHER DO: Hang up Family Responsibilities chart paper at the front of the room.

TEACHER SAY: Every person in a family has a job to do. Jobs you have in your family can also be called your responsibility in your family. For example, I am responsible for cooking dinner in my family. You might be responsible for washing the dishes or taking out the trash. What do you think the word "responsible" means in this context?

 **STUDENTS DO:** Raise hands to offer ideas.

TEACHER SAY: Take a moment to think about what jobs you are responsible for in your family.

TEACHER DO: Provide students **Think Time**. Then, use **Calling Sticks** to have students share family responsibilities. Record the jobs shared on chart paper.

4. TEACHER SAY: Turn to the next page in your book titled Family Responsibilities.

 **READ ALOUD: Listen for who is responsible for jobs in Nour's family.**

TEACHER SAY: I wonder how family members will work together. When we finish reading, we will draw and write to show how your family responsibilities are similar and different from Nour.

TEACHER DO: Read the story aloud, adjusting the process based on class reading proficiency. Pause to explain unfamiliar words if needed. After the story, facilitate a conversation using questions such as those suggested below, pausing to allow students to discuss answers with **Shoulder Partners**. Encourage students to look back at the story as needed to answer each question.

TEACHER SAY: Let's answer some questions now that we have read about the responsibilities that family members have in Nour's family.

- **Who is responsible for preparing dinner?**
- **Who is responsible for cleaning after dinner?**
- **Who is responsible for going to the market?**
- **Who is responsible for fixing the broken table?**
- **Who is responsible for helping with homework?**
- **Who is responsible for taking care of the little brother?**



 **STUDENTS DO:** Respond to questions in **Shoulder Partners**.

TEACHER SAY: Think about all the jobs and responsibilities in Nour's family. Who has those responsibilities in your family?

TEACHER DO: Provide **Think Time**.

TEACHER SAY: Let's share our family responsibilities with a partner. Sit with your Shoulder

Partner. You will take turns asking each other questions about responsibilities in your family. You can use the same questions we just answered about Nour's family, or you can ask your own. Let's share examples of questions we can ask our partner.

TEACHER DO: Use **Calling Sticks** to have three to four students share a question.

TEACHER SAY: Take turns asking questions to learn and share about your family responsibilities.



STUDENTS DO: Interview a partner to learn about responsibilities in each other's families.

5. TEACHER SAY: Thank you for sharing with your partner. Think about the most important responsibility you have in your family.

TEACHER DO: Provide **Think Time**.

TEACHER SAY: Open to the page in your student book titled My Responsibility in My Family.



READ ALOUD: Draw and write a sentence to describe your job, or responsibility, in your family.

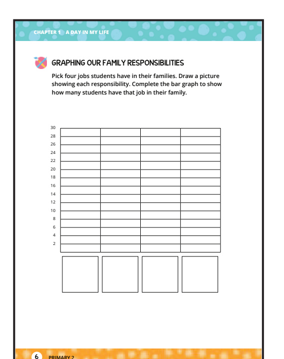


STUDENTS DO: Draw and write a sentence to describe their job, or responsibility, in their family.

6. TEACHER DO: Hang up prepared two-column chart with one column labeled as Responsibility and the second column labeled as How Many?

TEACHER SAY: Thank you for identifying a responsibility or job you have in your family. I am curious. Do any of us have the same jobs? I will use Calling Sticks to have students share the job they described. If you wrote about a similar responsibility, raise your hand. I will record how many of us have the same job on our chart.

TEACHER DO: Use **Calling Sticks** to have students share jobs in their family. As you record the responsibility on the chart, give a broad description and have students raise a hand if they wrote/drew something similar. Record the number with either tally marks or with a numeral.



TEACHER SAY: We collected data, or information, about roles in our different families. I want to display the data we have on our T-Chart as a bar graph. A bar graph is a way to visually display and compare information. Open your books to the page Graphing Our Family Responsibilities.

Note to Teacher: Consider showing students an example of a bar graph to review the different parts of a graph and how to add data to the graph. Students should have a familiarity from the previous year, but a review might be necessary at the beginning of the year.



READ ALOUD: Pick four jobs students have in their families. Draw a picture showing each responsibility. Complete the bar graph to show how many students have that job in their family.

TEACHER DO: If necessary, **model** possible pictures students could draw to represent the role. For example, a picture of a plate can be for washing dishes or a picture of food for making dinner. Have students work individually or in pairs.



STUDENTS DO: Complete the bar graph.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we shared and compared our family structures and the responsibilities family members have. Does everyone always fill their responsibilities? Have you ever forgotten a job you were supposed to do? What happened? Turn to a Shoulder Partner to share an experience.



STUDENTS DO: Share ideas with a **Shoulder Partner**.

Lesson 2 Overview

LEARNING OUTCOMES
Students will: • Identify how to cooperate with family members at home. • Read and answer questions about stories that describe everyday life and how problems are solved. • Respond to a story to make a connection to a character. • Describe choices made by characters in a story.

KEY VOCABULARY
• Problem • Solution

MATERIALS
• Pencils • Student book • Problem web charts (see Preparation)

LIFE SKILLS	
Learn to Know	Learn to Live Together
Problem-Solving: • Analyze the parts of the problem.	Empathy: • Demonstrate empathy in communicating with others.

PREPARATION
On large paper create a "problem web chart" for each of the following problems: having trouble with school work; accidently misplacing your tablet (or phone, or parent's phone, whatever is most appropriate for your students); not enough seats on the sofa for everyone; the door knob for your bedroom door broke. (You can use a separate piece of paper for each web.)



Discover (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen. Encourage students to lead this routine as they become more comfortable.

TEACHER DO: Hand out student books.

TEACHER SAY: Yesterday, we discovered responsibilities we all have in our families. Open your books to the page Graphing Our Family Responsibilities. With a Shoulder Partner, share what you discovered about jobs students have in their families.


Empathy


STUDENTS DO: Share and analyze data with a **Shoulder Partner**.

CHAPTER 1 A DAY IN MY LIFE — Lesson 2

GOOD MORNING NOUR

Think about the problems Nour faces in the morning. Follow along as the teacher reads.

I am very busy every day! First, my sister and I get ready for school. We have to share a bathroom. My sister Sara takes a long time to get ready. She makes us late sometimes.

My mom tells us to set a timer. This way, Sara will get ready faster.

Before we leave, we eat a quick breakfast. Grandma made us fuul. I am still hungry. Grandma makes me a fruit salad as well.

My sister and I walk to school together. The road can be very busy. I ask her to hold my hand. This way I stay safe. I am happy when we finally get to school. I wonder what we will do today!

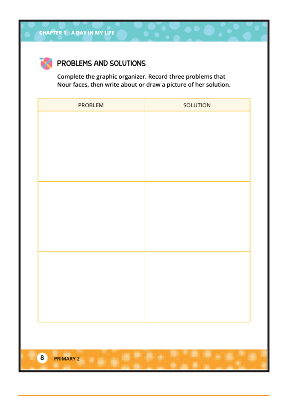
PRIMARY 2 7

2. TEACHER SAY: Turn to the page Good Morning Nour in your student book. We are going to listen to a story about how Nour gets ready for school each morning. As we read, think about what problems she faces. Follow along as I read.

TEACHER DO: Read the story in the student book to the class.

TEACHER SAY: What a busy day so far. Nour has already faced several different problems. Let's make a list of the problems and how she solved them. I am going to reread the story. When you hear a problem, raise your hand and we will stop to discuss what is happening.

TEACHER DO: Reread the story, pausing as students identify problems faced by Nour. As students





identify problems, only record a brief description of the issues on the board or chart paper. In the next activity, the students will work individually on recording the relevant solutions.

 **STUDENTS DO:** Raise hands when they hear a problem that Nour faces.

3. TEACHER SAY: **Open your books to the next page titled Problems and Solutions.**

 **READ ALOUD:** **Complete the graphic organizer. Record three problems that Nour faces, then write about or draw a picture of her solution.**

 **STUDENTS DO:** Complete the graphic organizer to record Nour's problems and solutions.

TEACHER DO: Move around the room and observe students who are able to recall solutions from the story. Encourage students to use the list at the front of the room as a reference for recording the problems. Problems should include: her sister taking a long time, still being hungry after breakfast, and crossing a busy street.

TEACHER SAY: **For each problem, Nour had the help of family members. Let's share how Nour solved each problem and who worked with her to solve the problem. Turn to your Shoulder Partner and share what you drew as a solution to the first problem.**

TEACHER DO: Prompt students to also share and compare solutions to the second and third problem. At this point, if you feel your students need additional practice identifying problems and solutions, you may wish to read another familiar story where a character encounters a problem in his or her daily life. As you read the story, stop to ask students to identify the problems and solutions in the story.

4. TEACHER SAY: **Each one of you encounters problems every day. Think about a problem you face at home. Then, think about how you are able to solve that problem and who might help you. Take time to think about a problem and solution.**

TEACHER DO: Provide **Think Time**.

TEACHER SAY: **Before we write in our books, we will share our daily problem and solution with others in the class. We will share our ideas with new partners by using Shake It Share It High Five. You will walk around the room, stopping to shake someone's hand, share your problem and solution, then high five and say thank you.**

Note to Teacher: If students are not already familiar with this strategy, **model Shake It Share It High Five**, *and practice with students before continuing.*

 **STUDENTS DO:** Engage in **Shake It Share It High Five** to share problems and solutions from their home life.

TEACHER DO: Listen as students share, prompting students as needed to describe a problem and solution. After students have shared with three to four students, signal them to return to their seats.

5. TEACHER SAY: **Thank you for sharing with each other and listening to your classmates. Open your books to the page My Problem and Solution.**

 **READ ALOUD:** **First, draw your ideas in the problem/solution organizer. Then write to share your problem and how you solved it.**

TEACHER SAY: **Make sure you include who is helping you solve your problem.**



STUDENTS DO: Draw a problem and solution in their daily home life. Write sentences to describe the problem and solution.

TEACHER DO: Move around as students work. Prompt students to explain the problem, solution, and who helps them with their problem. Make note of students who have difficulty composing sentences and adjust the task as needed.

6. TEACHER DO: Hang up "problem web charts" at the front of the room.

TEACHER SAY: **Thank you so much for working hard on your writing. We have learned that families can help each other when faced with problems. Let's brainstorm ways family members can help us solve different problems in our daily life. Here is the first problem we might face.**

TEACHER DO: Read the problem on the first web: Having trouble with school work.

TEACHER SAY: **I wonder how we can have someone in our family help us. Turn to a Shoulder Partner to share how you can find help.**

TEACHER DO: After students discuss in partners, use **Calling Sticks** to have students share ideas with the class. Record these on the problem web.

TEACHER SAY: **These were great ideas. Let's explore another problem.**

TEACHER DO: Repeat having students brainstorm and share for the following problems:

- Accidently misplacing your tablet (or phone).
- Not enough seats on the sofa for everyone.
- The door knob for your bedroom door broke.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: **Today we talked about problems we can encounter in our home life and how families can help us solve problems. Turn to a Shoulder Partner to share a time when a family member helped you solve a problem.**

 **STUDENTS DO:** Discuss problems with a **Shoulder Partner**.

Lesson 3 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Identify ways students cooperate with others at school. • Identify problems with peers encountered at school. • Describe how others can have positive and negative impacts on our behavior.	• Cooperate • Negative • Positive	• Pencils • Student books

LIFE SKILLS	
Learn to Work	Learn to Be
Collaboration: • Respect for other opinions.	Communication: • Good listening.



Discover (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

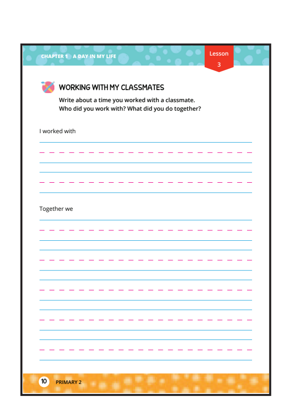
TEACHER SAY: Yesterday, we talked about the types of problems we have at home and how our family can help us find solutions. But we do not spend all our time at home. Where else do we spend our time?

TEACHER DO: Call on a few students to share ideas. Prompt students to consider school if it is not quickly mentioned.

TEACHER SAY: Yes, we spend a lot of time together at school. We spend time with our classmates and our teachers. Think about all the times during the school day you work with your classmates.

TEACHER DO: Provide **Think Time**, then use **Calling Sticks** to have students share experiences working with classmates.

TEACHER SAY: When we work with others in the classroom, we are helping each other learn. We can share ideas. We can work together to solve problems that might be difficult to solve on our own. When we work with others, we are cooperating. Let's learn more about what it looks like.


CHAPTER 1: A DAY IN MY LIFE
Lesson 3
WORKING WITH MY CLASSMATES
Write about a time you worked with a classmate. Who did you work with? What did you do together?
I worked with
Together we
10 PRIMARY 2

TEACHER DO: Hand out student books, crayons, and pencils.

2. TEACHER SAY: Open your books to the page Working with My Classmates.



READ ALOUD: Write about a time you worked with a classmate. Who did you work with? What did you do together?

TEACHER SAY: You could write about sharing ideas with a partner yesterday. Last year, you worked in groups to solve problems and build models. After you write, if you have time, you can use the space on the page to draw a simple picture to show what was happening.



STUDENTS DO: Write about a time they worked with a classmate.

TEACHER DO: Move around the room while students are writing. Support students as needed and periodically ask a nearby student to explain what they are writing about.

TEACHER SAY: Thank you for taking time to write. Now we will share what we wrote with each other. Let's use Shake It Share It High Five again today. As you move around to share, take your book with you to read to your partner. See if you can find someone who wrote a similar event to yours. When you find that person, stand with them.



STUDENTS DO: Find another student with a similar event using **Shake It Share It High Five**.

TEACHER DO: Support students in locating a partner who has a similar event. Once students have found a partner, prompt students to sit together.

3. TEACHER SAY: When we work with someone, we need to cooperate. When we cooperate, we work together politely and respectfully. We share ideas and work together to complete a goal. You described a time you worked with a classmate. Did you use polite language? Did you take turns? Did you share materials? Turn to your partner to discuss how you were cooperating.



STUDENTS DO: Discuss specific ways they cooperated with a classmate.

TEACHER SAY: I want you and your partner to Role Play how you cooperated in your event. For example, if you and your classmate were sharing materials, you could say, "Here is my blue crayon. You can use it." Or, if you needed help with your writing, you could say, "I am not sure how to write the word food. Can you help me?" Take time to discuss how you can act out your event with your partner. Then practice what you will say.





STUDENTS DO: Collaborate with a partner to **Role Play** how they cooperated with a classmate.

TEACHER DO: As partners discuss ideas, walk around to listen. Ask clarifying questions and listen for the language students are using. Support as needed. When you see many pairs are ready, match up nearby partners to create small groups of four to eight students.

TEACHER SAY: In your small groups, take turns sharing your Role Play. If you are listening, make sure you watch and listen carefully. When a pair of students are finished sharing, they will pick a listener to identify how they showed cooperation. Who can volunteer to review what we are about to do?

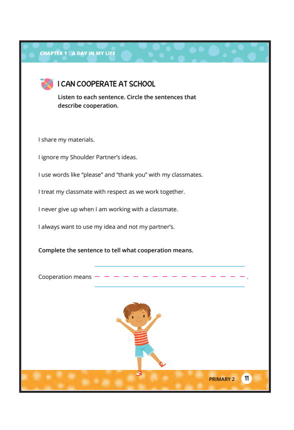
TEACHER DO: Call on a volunteer to restate the directions for sharing in small groups. Clarify directions as needed before prompting groups to begin sharing.





STUDENTS DO: Act out experiences with cooperation for a small group. Watch and listen to identify what cooperation looks like in the classroom.

TEACHER DO: Move around the room, listening as students act out and share. Provide feedback as needed.



CHAPTER 1 A DAY IN MY LIFE

I CAN COOPERATE AT SCHOOL

Listen to each sentence. Circle the sentences that describe cooperation.

I share my materials.

I ignore my Shoulder Partner's ideas.

I use words like "please" and "thank you" with my classmates.

I treat my classmate with respect as we work together.

I never give up when I am working with a classmate.

I always want to use my idea and not my partner's.

Complete the sentence to tell what cooperation means.

Cooperation means ________________.

PRIMARY 2 11

4. TEACHER SAY: Great job acting out your events. I heard great examples of cooperation. I heard ___ (provide specific examples from groups). Open your student books to the page titled I Can Cooperate at School.



READ ALOUD: Listen to each sentence. Circle the sentences that describe cooperation.

TEACHER DO: Read each sentence. Pause after each one to allow students to consider their answer.



STUDENTS DO: Circle sentences that describe cooperation.



READ ALOUD: Complete the sentence to tell what cooperation means.

TEACHER SAY: Think about the sentences that showed cooperation. You can complete the sentence with one word or an idea. When you finish, we will share our ideas.



STUDENTS DO: Complete the sentence to define cooperation.

5. TEACHER DO: Hang up chart paper. At the top write: Cooperation means.

TEACHER SAY: I will use Calling Sticks to have students share how they completed the sentence. I will record answers on this page to keep up throughout the school year to help us remember what cooperation means.

TEACHER DO: Use **Calling Sticks** to have students share. Record responses.

6. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we talked about cooperation with our classmates. When we cooperate, our classmates can help us solve problems and accomplish our goals. Turn to a Shoulder Partner and share how cooperating with your classmates can help you.



STUDENTS DO: Discuss what they have seen with a **Shoulder Partner**.

TEACHER SAY: Tomorrow we will begin to learn how we can be good citizens. What do you think it means to be a good citizen?

TEACHER DO: Use **Calling Sticks** to select four students to share their thoughts on being a good citizen. Use this as a way to assess students' familiarity with the word citizen. You may modify the number of students called upon, depending on the time you have left in class.

Lesson 4 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Describe what it means to be a good citizen. • Analyze behavior in terms of good citizenship. • Categorize daily behaviors.	• Citizen • Citizenship • Community • Respect	• Citizenship poster • Pencils • Student books

PREPARATION

On chart paper write the words "Citizenship means" at the top. Underneath, write the following phrases: being respectful to others, treating others fairly, being honest, showing loyalty to our friends and family. Cover the sentences until you reveal them during the activity.

LIFE SKILLS

Learn to Live Together	Learn to Live Together
Respect for Diversity: • Solicit and respect multiple and diverse perspectives to broaden and deepen understanding.	Empathy: • Demonstrate empathy in communicating with others.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: Yesterday, we talked about cooperation when we work with others. Turn to a Shoulder Partner and remind each other what it means to cooperate.



STUDENTS DO: Share briefly with a **Shoulder Partner** what it means to cooperate.

TEACHER DO: Use **Calling Sticks** to have students share a definition for cooperation.

2. TEACHER SAY: Today we will learn what it means to be a good citizen. A citizen is a person who lives in, or belongs to, a community. We are all citizens of Egypt. We all also belong to our classroom community. We will learn what it means to be a good citizen in our classroom and a good citizen outside of our classroom in our communities and in our country.

TEACHER DO: Hang up the citizenship poster at the front of the room. Have each sentence covered up initially. Hand out student books.

TEACHER SAY: I have four statements that describe what citizenship means. As I uncover each one, I want you to think about how you demonstrate this behavior every day. I also want you to think about how you can improve on demonstrating good citizenship.

TEACHER DO: Uncover the first statement: being respectful to others. Read the statement aloud. For this next part, allow students to discuss ideas in groups of three to four before recording ideas in their student books.

TEACHER SAY: What do you think it means to be respectful to others? You can discuss your ideas in small groups.



STUDENTS DO: Discuss ideas for being respectful in small groups.

TEACHER DO: Monitor students, listening to ideas shared and clarify when needed. Make note of common misunderstandings to address with the whole class.

TEACHER SAY: **Thank you for sharing your thinking. Being respectful means: listening when others are speaking, encouraging or supporting others in your life, helping others solve problems, using polite language like please and thank you, and treating others with kindness.**

Now open your student books to the page titled Being Respectful.



READ ALOUD: **Under the smiley face, list behaviors that show being respectful.**

TEACHER DO: Only read the first part of the directions. Encourage students to list real examples, thinking back through the day for respectful actions.



STUDENTS DO: List behaviors that show being respectful.

3. TEACHER SAY: **I know that sometimes we are not always respectful, and we can improve on our behavior. Share a time when you did not show respect. For example, sometimes I ignore what someone is saying to me. That is not being respectful. I know that I should always listen when someone is speaking to me. Turn to your small group and share a time you were not respectful.**



STUDENTS DO: Share times they were not always respectful.

TEACHER DO: Monitor students, listening for ideas shared and clarify when needed.

TEACHER SAY: **Look back at your student books. Point to the side of your chart that has a sad face.**



READ ALOUD: **Under the sad face, list examples of disrespectful behavior.**



STUDENTS DO: List examples of disrespectful behavior.

4. TEACHER SAY: **Our friends and family can help us make positive choices. Look at your list of examples of disrespectful behavior. In your small group, take turns sharing a time you were not respectful and brainstorm ways to improve your behavior to make a better choice.**



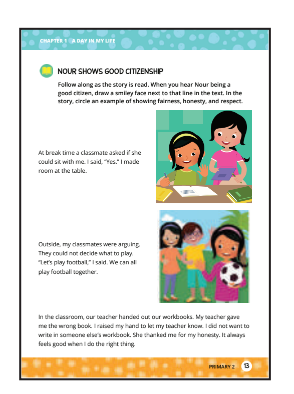
STUDENTS DO: Discuss ways to improve respectful behavior.



TEACHER DO: After students brainstorm in groups, use **Calling Sticks** to share ways to help others make better, respectful choices. To reinforce the importance of respect, ask students to consider how they feel when someone is not respectful to them.

5. TEACHER DO: Repeat steps 2 through 4 for each citizenship statement, discussing at least two statements. If time allows, have students discuss all four statements

- Define treating others fairly as: treating others the way you want to be treated, taking turns, following the same rules.
- Define being honest as: telling the truth, admitting when you have done something wrong.
- Define showing loyalty to our friends and family as: doing what you say, following through on your promises.



6. TEACHER SAY: **We can all be good citizens every day. We can also help each other make positive choices in our behavior. We can help remind our friends and family to show good citizenship. Let's listen to a story about our friend Nour and find out how she is being a good citizen. As we read, listen for how her choices affect others around her. Open your books to the page Nour Shows Good Citizenship.**



READ ALOUD: **Follow along as the story is read. When you hear Nour being a good citizen, draw a smiley face next to that line in the text.**

TEACHER DO: Read the story to the class. As students improve in reading proficiency, allow

students to alternate reading lines out loud when appropriate.

TEACHER SAY: Turn to a Shoulder Partner and discuss times that Nour showed good citizenship.



STUDENTS DO: Share examples from the story with a **Shoulder Partner**.



READ ALOUD: In the story, circle an example of showing fairness, honesty, and respect.

TEACHER DO: Reread the story to the class. Write the words "fairness," "honesty," and "respect" where students can see them. Have students label the text they circle with the behavior it shows.



STUDENTS DO: Circle examples of good citizenship in the story, labeling the examples as "fairness," "honesty," or "respect."

TEACHER DO: Monitor what students are circling as a check for understanding. Clarify any misunderstandings as a class. If time permits, have students share what they circled and the examples from the story.

TEACHER SAY: Let's look at the first time Nour was a good citizen. She makes room for another student. What do you think the classmate will do the next time someone asks to sit by her? Share your ideas with your Shoulder Partner.

TEACHER DO: Facilitate discussion using **Shoulder Partner**s and whole class conversation on how each of Nour's actions might encourage other students to be good citizens in the future.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we learned what it means to be a good citizen and how we can help affect other's behaviors. Let's Popcorn to identify examples of good citizenship. I will call on one friend to share an example of good citizenship. Then that student will call on someone else. We will continue to Popcorn around the room.

Note to Teacher: If necessary, **model** *and practice the* **Popcorn** *strategy before beginning.*

TEACHER DO: Call on student to start.



STUDENTS DO: Popcorn to share examples of good citizenship.

TEACHER SAY: Tomorrow we will learn about patterns in our daily life. We will think about the choices we make throughout the day. When do you think you make choices in your daily life? Let me use my Calling Sticks to choose someone to answer.

TEACHER DO: Use **Calling Sticks** to select four students to share choices they make day to day. Modify the number of students called upon based on the time you have left in class.

Lesson 5 Overview

LEARNING OUTCOMES

Students will:
- Observe patterns in their daily routines.
- Identify and describe choices made in daily life.
- Analyze how they make choices.

PREPARATION

On large chart paper, draw a horizontal straight line. At the top of the page write: Timeline of Nour's Day.

KEY VOCABULARY

- Pattern
- Routine

LIFE SKILLS

Learn to Live Together

Empathy:
- Demonstrate empathy in communicating with others.

MATERIALS

- Timeline



Learn (90 minutes)

Directions

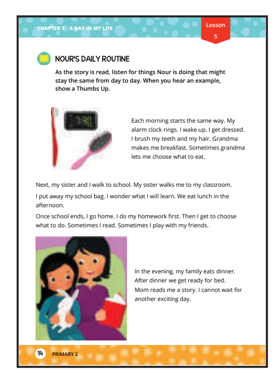
1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: Yesterday, we talked about what it means to be a good citizen. Let's Popcorn again to review what we learned.

TEACHER DO: Call on a student to describe a good citizen.



STUDENTS DO: Popcorn around the room, describing a good citizen.



CHAPTER 1 A DAY IN MY LIFE

Lesson 5

NOUR'S DAILY ROUTINE

As the story is read, listen for things Nour is doing that might stay the same from day to day. When you hear an example, show a Thumbs Up.

Each morning starts the same way. My alarm clock rings. I wake up. I get dressed. I brush my teeth and my hair. Grandma makes me breakfast. Sometimes grandma lets me choose what to eat.

Next, my sister and I walk to school. My sister walks me to my classroom.

I put away my school bag. I wonder what I will learn. We eat lunch in the afternoon.

Once school ends, I go home. I do my homework first. Then I get to choose what to do. Sometimes I read. Sometimes I play with my friends.

In the evening, my family eats dinner. After dinner we get ready for bed. Mom reads me a story. I cannot wait for another exciting day.

14 PRIMARY 2

2. TEACHER SAY: In our stories about Nour, we have seen what a typical morning looks like. We have also seen how she can be a good citizen at school. These two stories highlight her daily routine. Every day, Nour makes choices. Today we will learn about patterns in our daily routines and how we make choices to meet our needs every day.

TEACHER DO: Hand out student books and direct students to open to the page Nour's Daily Routine.

TEACHER SAY: Today's story is about our friend Nour's daily routine. A routine is something that happens the same every day. For example, every morning after I wake up, I brush my teeth. I do this the same each morning. It is part of my routine. Think about something that you do every day.

TEACHER DO: Provide **Think Time**.

TEACHER SAY: Turn to a Shoulder Partner to share part of your routine.



STUDENTS DO: Share one part of their daily routine with a **Shoulder Partner**.

TEACHER DO: Use **Calling Sticks** to have a few students share part of their routine. Listen for misunderstandings to clarify as a whole class.



READ ALOUD: As the story is read, listen for things Nour is doing that might stay the same from day to day. When you hear an example, show a Thumbs Up.

TEACHER SAY: We can stop and identify parts of her daily routine together. Let's practice. Show me a quiet Thumbs Up.

 **STUDENTS DO:** Silently show **Thumbs Up**.

TEACHER SAY: Great, let's read.

TEACHER DO: Read the story out loud to the students. If student proficiency allows, have students alternate reading sentences out loud. Pause when students hear part of Nour's routine (and show **Thumbs Up**). This includes how she gets ready, eating breakfast, walking to school, and so on. Reread the story if necessary to identify each part of her routine.

 **STUDENTS DO:** Follow along as the story is read, giving a **Thumbs Up** to identify parts of Nour's routine.

3. TEACHER DO: Hang up the timeline chart paper at the front of the room.

TEACHER SAY: As we read, you were able to identify different events in Nour's daily routine. Let's make a timeline to show when the events occur. A timeline can show the order that things happen. I will start writing on the timeline. At the beginning I will write the FIRST thing that Nour does each day: Wakes up to her alarm clock. Think about what happens next and Whisper your answer into your hand.

Note to Teacher: ***Model*** *the* ***Whisper*** *strategy with the class.*

 **STUDENTS DO: Whisper** answer.

TEACHER DO: Use **Calling Sticks** to have a student share what to add to the timeline. You can write words, draw pictures, or use both words and pictures. Repeat until all events from the story are on the timeline.

TEACHER SAY: When we look at Nour's timeline, we can observe a pattern in her daily events or her routine. When we see a pattern, we can predict what will happen each day. Who can predict what Nour will do when she arrives at school? How do you know?

TEACHER DO: Call on a student volunteer to identify a prediction. You can also ask for students to predict what Nour will do after school or before she leaves for school. Students should use evidence from the timeline to support their predictions.

4. TEACHER SAY: Nour also made choices in her daily activities. Turn to a Shoulder Partner and discuss the choices she made.

 **STUDENTS DO:** Discuss choices Nour made during the day.

TEACHER DO: Use **Calling Sticks** to have students share choices Nour made during the day. Examples: choosing clothes to wear, what to eat for breakfast, what to do after finishing homework, which book to read at bedtime.

TEACHER SAY: When we make choices, we are thinking first about what we need, like food, shelter, and clothing. Then we think about things we want, such as toys or types of entertainment. Let's brainstorm the choices we make throughout our day. First, in small groups, use Talking Sticks to take turns sharing ideas. Then we will list all of our ideas together. Remember, when you use Talking Sticks, the person with the stick gets to share before passing it to the next person in the group. Everyone can get more than one turn. I will give each group a time of day to brainstorm choices and we will put all of our ideas together.

Note to Teacher: Introduce the ***Talking Sticks*** *strategy as a whole group.* ***Model*** *how to pass the stick to a group member.*

TEACHER DO: Put students into groups of four or five and give each group a **Talking Stick** to use. Assign each group a time of day: morning/before school, school before lunch, school after lunch, afternoon at home, evening/bedtime. While groups share, hang up a blank sheet of chart paper.

STUDENTS DO: Share choices they make throughout the day.

TEACHER SAY: Thank you for brainstorming in your groups. Let's create a list together.

TEACHER DO: Use **Calling Sticks** to create a class list of choices.

5. TEACHER SAY: Open your books to the page titled Graphing Our Choices. Look at the list we created together. We will use the items on our list to create a graph to show the types of choices we make. We make choices about food, clothing, work, and entertainment. These choices are listed along the bottom of the graph.



READ ALOUD: Look at the class list. Count how many choices are made for each category. Record the number on the graph.

Note to Teacher: If necessary, ***model*** *how to go through each choice on the list and record one category on the bar graph. Then, allow students to work independently to complete the graph. You can also consider creating a large version of the student book page on chart paper to complete the graph as a whole class.*



STUDENTS DO: Graph the types of choices students make throughout the day.

TEACHER SAY: Now that you have your graph created, we can analyze our graph to learn more about our choices. First, let's identify which to of our categories are basic needs?

TEACHER DO: Call on two or more students to answer. After the first student answers, ask a second student whether or not he or she agrees.

TEACHER SAY: That is correct, clothing and food are basic needs. How can we find out how many choices we make to fill a basic need?



STUDENTS DO: Offer ideas [add the number of clothing and food choices]. Solve the addition problem and record the answer in the student book.

TEACHER SAY: How many choices did we record about entertainment or work?



STUDENTS DO: Solve the addition problem and record the answer in the student book.

TEACHER SAY: What type of choices do we make the most?



STUDENTS DO: Determine the type of choices made most often during the day.

TEACHER DO: As needed, review how to compare numbers to find the largest number, and discuss why this strategy is used to answer the question.



6. TEACHER SAY: When we make choices, we can affect not only ourselves but those around us. Look at our list of choices we make daily. Consider how a choice affects someone around you. This could be your friends, family, the school, or your community.

Here is an example: When you choose what to eat, it affects you and the adult who is helping to make your food. Or, if you choose to play a certain game with friends, you affect all of those who are playing with you.

Turn to a Shoulder Partner to discuss how a choice on the list can affect someone else around you.



STUDENTS DO: Discuss effects of choices.

TEACHER DO: Use **Calling Sticks** to have students share.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we talked about daily routines and choices we make. Move around and

use Shake It Share It High Five to share a choice you make, what category that choice belongs in (food, clothing, and so on), and who the choice affects.



STUDENTS DO: Shake It Share It High Five to summarize what they learned about choices.

TEACHER SAY: Tomorrow we will explore and learn how we manage our time. What do you think we might discuss?

TEACHER DO: Use **Calling Sticks** to select four students to share their thoughts on what they learn tomorrow. Modify the number of students called upon based on the time you have left in class.

Lesson 6 Overview

LEARNING OUTCOMES

Students will:
- Practice telling and writing time to the hour and half hour.
- Identify strategies to effectively manage time.

PREPARATION

Bring in a music-playing device such as tape player, tablet, or phone. If this is not possible, substitute the music in today's activity with having students sing a favorite song and giving them a signal (such as turning off the lights or clapping) for when they should stop. If scissors are not available for the Get Up and Move Record Sheet, students may use lined notebook paper to record answers.

KEY VOCABULARY

- Analog
- Digital
- Priority
- Time management

MATERIALS

- Student book
- Pencils
- Clock and/or digital timer
- Chart paper, whiteboard, or clock model
- Scissors
- Music player (tape player, tablet, or phone)

LIFE SKILLS

Learn to Work	Learn to Live Together
Productivity: • Setting clear goals.	Sharing: • Effective management and organization of tasks.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: Yesterday, we created a timeline of Nour's daily activities and discussed how we make choices. What are some activities you do almost every day? I will use my Calling Sticks to select the first student, then you will Popcorn to the next person.

TEACHER DO: Use **Calling Sticks** to select a student to respond.

 **STUDENTS DO:** Share daily activities, then **Popcorn** to another student.

TEACHER SAY: How can we make sure we have time for the things we WANT to do, like play with a friend, and the things we HAVE to do, like jobs in the house?

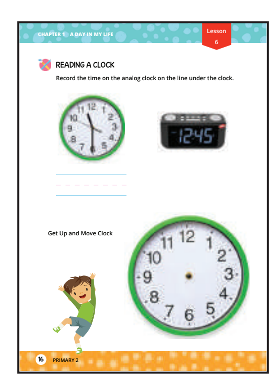
TEACHER DO: Use **Think Time** to give students time to consider the question. Then use **Calling Sticks** to have students share ideas.

TEACHER SAY: Remember, Nour said that an alarm clock helps start her day. Give me a Thumbs Up if an alarm clock helps wake you up in the morning.

 **STUDENTS DO:** Show a **Thumbs Up** to answer.

2. TEACHER SAY: Today we will learn how to manage time so we can accomplish all our tasks. Managing time means using time wisely. To use our time wisely, we need to practice reading clocks.

TEACHER DO: Hand out student books.



TEACHER SAY: Turn to the page Reading a Clock. There are two types of clocks: an analog and a digital clock. Point to the analog clock.

 STUDENTS DO: Point to the analog clock.

TEACHER DO: Scan the room to see if the students are pointing to the analog clock.

TEACHER SAY: Great. The clock with the numbers in a circle is an analog clock. Now point to the digital clock. The digital clock shows only numbers.

 STUDENTS DO: Point to the digital clock.

TEACHER DO: Scan the room to see if the students are pointing to the digital clock.

TEACHER SAY: Look back at the analog clock. Who remembers how to read this type of clock?

TEACHER DO: Call on students to explain.

TEACHER SAY: That is right. The smaller hand of the clock points to the hour. The longer hand counts the minutes.

 READ ALOUD: **Record the time on the analog clock on the line under the clock.**

 STUDENTS DO: Record the time shown on the analog clock.

TEACHER DO: Call on a student to share the time shown on the analog clock.

TEACHER SAY: Thank you for sharing. Please correct your work, if needed.

Note to Teacher: Reading an analog clock should be a review of skills taught in Primary 1. As you scan the class, make note of any students having difficulty writing the correct time.

3. TEACHER SAY: Where do you see clocks throughout your day? Are they analog or digital?

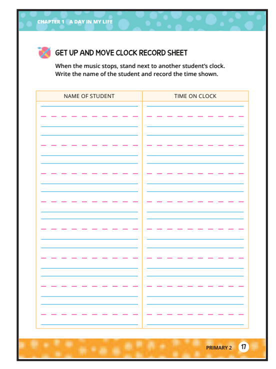
TEACHER DO: Use **Calling Sticks** to select a few students to share where they see clocks and what type they see.

TEACHER SAY: We probably see more digital clocks around us today, but knowing how to read an analog clock is also important. Let's practice reading an analog clock and get some exercise too. I can draw the hands of the clock to show any time for the hour, or half hour. For example, I am going to draw a clock that reads 10:30.

TEACHER DO: Model on chart paper, whiteboard, or a model clock, placing the hands of the clock at 10:30. Call attention to the length of the minute and hour hands.

TEACHER SAY: Notice that my shorter hand is pointing to the number 10 for the hour. The longer hand is pointing to the 6 which shows us 30 minutes past the hour. Now it is your turn. On the blank analog clock face labeled GET UP AND MOVE CLOCK, draw the hands of the clock to show any time for an hour or half hour.

 STUDENTS DO: Draw hands on the blank clock to show a time on the hour or half hour.



TEACHER DO: Circulate around the room making sure that the shorter hand is pointing to the hour.

TEACHER SAY: Now, let's get moving. Our brains think better when we get active. Leave your student book open to the clock you just drew. Make sure your name is written neatly on this page. Remove the next page, Get Up and Move Record Sheet, from your student book. When I play the music, dance to another student's clock.

Note to Teacher: An alternative to removing the Dance Clock Record Sheet is to give each student a piece of blank paper for recording answers. Play music for students and encourage them to dance as they move around the room.



READ ALOUD: When the music stops, stand next to another student's clock. Write the name of the student and record the time shown.

TEACHER DO: Play music as students move around the room. Stop the music, allow time for students to record information, then repeat several times.



STUDENTS DO: Dance around the room to another student's clock. When the music stops, write the name of the person and the time they drew on the clock.

Note to Teacher: End the activity after 5 to 10 cycles. If you want to use these papers as a formative assessment, make sure students have written their own names at the top of their pages and collect the papers to review. If a small number of students show misunderstanding, consider making time to review in a small group while other students complete another task. If a large number of students show misunderstanding, review reading clocks in more detail with the whole class.

TEACHER SAY: Great job. I am glad we practiced reading a clock.

TEACHER DO: Hold up student book page Time to Try Something New.

TEACHER SAY: How many hours are there in one day? Whisper to your Shoulder Partner.



STUDENTS DO: Whisper answer to **Shoulder Partner**.

4. TEACHER SAY: There are only 24 hours in one day. We must make some choices as to how we spend our time each day. Remember when you talked about choices earlier. Turn to the page Time to Try Something New in your student book. At the top of the page there is a box labeled "Priorities." A priority is something you think is very important. For example, studying is a priority. You might like watching TV, but it is not a priority. Let's practice identifying some priorities. Stand Up If you think the first part of the statement is more important than the second part. Here's the first question: Eating or playing with toys?



STUDENTS DO: Stand to vote that eating is more important than playing with toys.

TEACHER SAY: Well done. Let's try another one.

TEACHER DO: Continue using **Stand Up If** to allow students to consider priorities. Use the following choices, or make up your own:

- Shopping for a toy or shopping for clothes?
- Helping with chores or visiting a friend?

Note to Teacher: Some students may disagree. This is a great opportunity for discussion and listening to others' views.

TEACHER SAY: Use Think Time to identify one or two more examples of priorities in your life.



STUDENTS DO: Use **Think Time** to identify priorities in their lives.

TEACHER SAY: I will use my Calling Sticks to select students to share a priority.

TEACHER DO: Use **Calling Sticks** to select five or six students to share a priority.

5. TEACHER SAY: Thank you for sharing. Look back at your student books. Under the title "Priorities," it says MUST DO and WANT TO DO. Something you MUST DO might be eating dinner. Something you WANT TO DO might be watching TV.



READ ALOUD: Write the things you MUST DO today and the things you WANT TO DO.





STUDENTS DO: Record MUST DO and WANT TO DO ideas in the rows provided on the student page.

TEACHER DO: Circulate around the room as students write, asking clarifying questions and offering support where needed.

TEACHER SAY: **It is important to make time for the activities on your MUST DO list. What would happen if we spent all day doing the things we WANT TO DO?**

TEACHER DO: Use **Calling Sticks** or call on students with hands raised to answer.

TEACHER SAY: **Let's think about ways we can manage our time. We can do our priorities first, and use the time left over for things we WANT TO DO. Can anyone think of a way that a clock could help us manage time?**

TEACHER DO: Use **Calling Sticks** or call on students with hands raised to answer.

TEACHER SAY: **Another idea is: If we set a time limit for the things we WANT TO DO, we know we will have enough time left for our priorities. We can use mathematics to help us use our time wisely. For example, if you have 20 minutes of free time and folding laundry takes 10 minutes, how much time will you have to watch TV? Whisper your answer to your Shoulder Partner.**

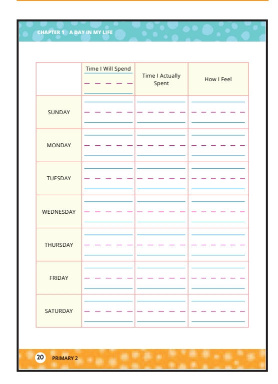
 **STUDENTS DO:** **Whisper** 10 minutes to **Shoulder Partner**.

TEACHER DO: In order to have students practice subtracting numbers under 20 by memory, provide three to four more examples using the "how much time do you have left?" format. Have students **Whisper** answers to partners or show you answers on their fingers when the answer is less than 10.

6. TEACHER SAY: **Now that you have your priorities, let's try something new. Look at your MUST DO list. Choose a priority you want to focus on for a week. Draw a circle around that priority. Complete the sentence: This week I will ____ for a certain amount of time each day.**

 **STUDENTS DO:** Complete the sentence starter.





CHAPTER 1: A DAY IN MY LIFE

	Time I Will Spend	Time I Actually Spent	How I Feel
SUNDAY			
MONDAY			
TUESDAY			
WEDNESDAY			
THURSDAY			
FRIDAY			
SATURDAY			

20 PRIMARY 2

TEACHER SAY: **On the next page, fill in the first column labeled: Time I will spend. Write how much time you will spend on this priority.**

 **STUDENTS DO:** Complete the first column.

TEACHER SAY: **Each day, you will fill in the chart with the time you actually spent, and how it made you feel. It is important to make time for our priorities. We should focus on completing our MUST DO list before we work on our WANT TO DO list.**

There are some other ways we can use our time wisely. How many of you take breaks when you study? Show me a Thumbs Up.

 **STUDENTS DO:** Show **Thumbs Up** if they take breaks when they study.

TEACHER SAY: **At home, you can do your school work with short breaks to keep you focused. Decide how long you will work and then set a timer. When the timer goes off, take a five-minute break to stretch, dance, or get a snack. Then, go right back to your school work.**

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: **Today we talked about time and time management. It is important to identify your priorities each day or week by making a list of things you MUST DO and things you WANT TO DO. This will help you make sure you have time for your priorities. One way is to do the things on your MUST DO list first. What is a new idea you will try? Discuss with your Shoulder Partner.**

TEACHER DO: Allow students a moment to share ideas with a partner.

TEACHER SAY: **When we work on big projects in groups, we need to manage our time in order to get everything done. Tomorrow we will learn some strategies to work better in groups.**

Lesson 7 Overview

LEARNING OUTCOMES

Students will:
- Identify conflict resolution skills to solve problems.
- **Role Play** using conflict resolution skills.

KEY VOCABULARY

- Compromise
- Conflict resolution

MATERIALS

- Student book
- Pencils
- Chart paper with two vertical columns labeled Peace Makers and Peace Breakers
- Markers
- Pre-made charts (see Preparation)

PREPARATION

- Chart prepared in advance on Steps to an Apology:
  1. Think to yourself, did I do something wrong?
  2. Look at the other person and talk to them in a calm voice.
  3. Say, "I am sorry that I…"
- Chart prepared in advance on Compromise:
  1. Stay calm. Count to 10 or take five deep breaths.
  2. Tell how you feel and why. "I feel ____ because____."
  3. Think of possible solutions together. "We could do/have ___, ___, or ___."
  4. Agree on a compromise. "We can _____."
- One paper clip per pair of students

LIFE SKILLS

Learn to Live Together

Empathy:
- Demonstrate empathy in communicating with others.

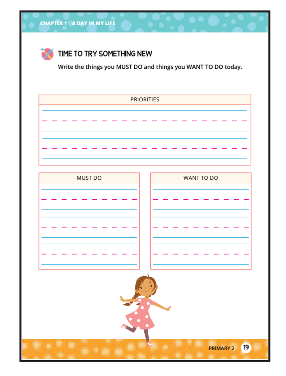
Learn to Be

Communication:
- Good listening.
- Self-expression.



Learn (90 minutes)

Directions



1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: Yesterday, we talked about using our time wisely. Did you use any strategies this morning to help manage your time? Turn to your Shoulder Partner and share.

 **STUDENTS DO:** Share a time management skill or strategy they tried.

TEACHER SAY: Look at the chart we made in our books on the page Time to Try Something New. Go to the chart on the next page and record how much time you actually spent on your priorities yesterday. Also write how that makes you feel. You should continue to do this every day at home.

 **STUDENTS DO:** Complete chart for one day.



2. TEACHER SAY: Using our time wisely can help us with the problem of not having enough time to do something. Our Share project is to work with classmates to create a play. Sometimes we have problems working with friends or family members. When the problem we face is between us and another person, we call it a conflict. Repeat the word conflict with me.

When you have a conflict, you might get angry. We have been reading many stories about Nour. What problem, or CONFLICT, do you think Nour might face with her brother or sister?

TEACHER DO: Use **Calling Sticks** to select three or four students to respond.

TEACHER SAY: **Have you ever had a conflict with a friend or family member? Raise your hand if you are willing to share with the class.**

TEACHER DO: Select volunteers from students with raised hands.



TEACHER SAY: **When you have a problem with someone else, you need a way to solve it peacefully. This is called conflict resolution. Resolution means finding a way to solve something. Repeat the words conflict resolution with me.**

3. TEACHER SAY: **We are happiest when we are at peace with others. Earlier, you explored how your choices can affect other people. When you have a conflict, your actions can break peace or make peace. Let's think of some ways you can break the peace. Raise your hand if you have an idea to share.**

TEACHER DO: Using chart paper, record student responses. Sample answers may include:

Peace Breakers	Peace Makers
Yell and scream	
Interrupt	
Fight	
Tell lies	
Use mean words	
Ignore rules	

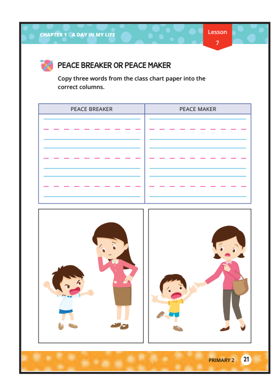


STUDENTS DO: Share actions that break peace.

TEACHER SAY: **Those are all ways you can break the peace. What are some things you can do to make peace?**

TEACHER DO: Using chart paper, record student responses. Sample answers may include:

Peace Breakers	Peace Makers
Yell and scream	Ask for help
Interrupt	Apologize
Fight	Take turns
Tell lies	Respect different ideas
Use mean words	Use kind words
Ignore rules	Problem-solve





TEACHER SAY: **Thank you for sharing your ideas. It is important to identify ways that we break peace and ways that we can make peace so we can all work together.**

TEACHER DO: Hand out student books.

TEACHER SAY: **Turn to the page Peace Breaker or Peace Maker in your student book. Let's record our ideas so that we can remember them.**

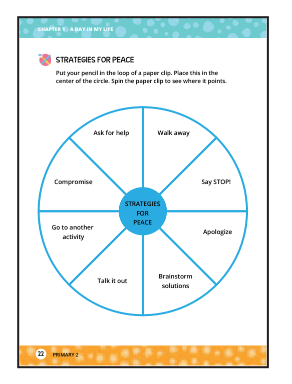


READ ALOUD: **Copy three words from the class chart paper into the correct columns.**



STUDENTS DO: Complete the chart, following the directions provided.

4. TEACHER SAY: **Let's all remember to be peace makers when we work with others. Our Share project will be a good opportunity to practice. Let's learn more strategies we can use to help be**


CHAPTER 1 A DAY IN MY LIFE

STRATEGIES FOR PEACE

Put your pencil in the loop of a paper clip. Place this in the center of the circle. Spin the paper clip to see where it points.

22 PRIMARY 2



a better peace maker. Turn to the page Strategies for Peace. Read the words in the circle.

TEACHER DO: Read aloud the words in the circle as the students point to each and repeat after you.

TEACHER SAY: The word COMPROMISE means each person gets some of what they want in order to find a solution. This usually means they also have given something up. For example, if Nour wants to play outside and her friend Mohammad wants to play inside, they might compromise and play outside for five minutes and then inside for five minutes. Each person gets a little of what they want. Give me a Thumbs Up if you have ever had to compromise.

TEACHER DO: Prompt students to share a personal example with a **Shoulder Partner** or call on a few students to share with the class if you think they will be comfortable doing so.

TEACHER SAY: When you get angry at someone, you can use the compromise strategy to work out a peaceful solution.

TEACHER DO: Point to chart on compromise.

TEACHER SAY: Look at the way we can find a compromise with someone. Read along with me.
1. Stay calm. Count to 10 or take five deep breaths.
2. Tell how you feel and why. "I feel ____ because____."
3. Think of possible solutions together. "We could do/have ___, ___, or ___."
4. Agree on a compromise. "We can _____."

 **STUDENTS DO:** Read aloud with the teacher.

TEACHER SAY: You and your partner are working on an art project. You both want to use the blue crayon/paint. Turn to your Shoulder Partner and practice the steps of a compromise.

 **STUDENTS DO:** Practice steps in finding a compromise with a partner.

TEACHER DO: Circulate around the room as the students practice, listening for the steps in compromise and prompting students to refer to the chart paper if needed.

TEACHER SAY: Learning to find a compromise with someone is a skill you will need to practice the rest of your life.

TEACHER DO: Point to the chart, Steps to an Apology.

5. TEACHER SAY: Apologizing is another very important strategy for peace. The steps are:
1. Think to yourself, did I do something wrong?
2. Look at the other person and talk to them in a calm voice.
3. Say, "I am sorry that I…"

Let's practice. Suppose Nour broke her grandmother's favorite vase. I will use Calling Sticks to ask someone to Role Play how to apologize.

TEACHER DO: Use **Calling Sticks** to select a student. Point to anchor chart to prompt students as they **model** how to apologize.

 **STUDENTS DO: Model** how to give an apology for classmates.

TEACHER SAY: Turn to your Shoulder Partner and practice giving an apology for taking a partner's pencil without permission.

 **STUDENTS DO:** Practice giving an apology.

TEACHER DO: As the students practice, circulate around the room, listening to the conversations. Continue to introduce and explain each section of the wheel, or choose four strategies to highlight if time is short. Encourage students to ask questions and share information. Hand out one paper clip per pair of students as you facilitate the discussion.

6. TEACHER SAY: **Well done. Let's use our Strategies for Peace page to practice the rest of the strategies.**

 READ ALOUD: **Put your pencil in the loop of a paper clip. Place this in the center of the circle. Spin the paper clip to see where it points.**

TEACHER DO: **Model** for students how to make a spinner using a pencil and paper clip.

 STUDENTS DO: Follow the setup directions and practice spinning the paper clip.

TEACHER SAY: **We can use the spinner to choose a strategy to practice. I will describe a conflict out loud. Spin the spinner and use the strategy the paper clip points to as a way to solve the conflict. If you are ready, show me a Thumbs Up.**

 STUDENTS DO: Show **Thumbs Up** if ready to proceed.

TEACHER SAY: **Conflict 1: Someone teases you about something you are wearing.**



 STUDENTS DO: Spin the paper clip, use the strategy to **Role Play** solving the conflict.

TEACHER SAY: **Very good. Using the same conflict, spin again and let your partner try to solve it another way.**



 STUDENTS DO: Spin the paper clip. Suggest a different strategy to solve the conflict.

TEACHER DO: Repeat the process with at last one more conflict. (Example: Your Friend blames you for breaking their favorite toy.) Have partners spin twice to apply two different strategies to one conflict. Add more conflicts in order to extend the activity and promote creativity in conflict resolution.

TEACHER SAY: **When you have a problem, use your Strategies for Peace and Peace Breaker or Peace Maker pages to help you solve your problem peacefully. It is important to remember to be a peace maker when you post things online also. When we use technology, it is important to be kind and to use our peace making skills. Can anyone share an example of this they have heard about or experienced?**

 STUDENTS DO: Share experiences with online peace making if applicable.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: **Today we talked about conflict resolution. We learned some strategies for keeping or making peace. Look at your Strategies for Peace, and add two more lines to your Peace Makers column.**

 STUDENTS DO: Record two strategies from the circle into their list of ways to make peace.

TEACHER SAY: **Do you think you could use any of these strategies at home? Share ideas with your Shoulder Partner.**

 STUDENTS DO: Discuss strategies they might use at home with a **Shoulder Partner**.

TEACHER SAY: **Please do not forget to complete your chart for Time to Try Something New. Do this every day to keep track of how you spend your time.**

Lesson 8 Overview

LEARNING OUTCOMES

Students will:
- Review the student rubric for the Share project.
- List the parts of a play.
- Collaborate to write a short play.

PREPARATION

Schedule the use of computers if available, specifically for the students who will be writing scripts (roughly half the class). If computers are not available, distribute lined paper. Copy the graphic organizer from the Planning a Play page in the student book onto chart paper.

KEY VOCABULARY

- Characters
- Compromise
- Conflict resolution
- Script
- Props
- Scenery
- Setting

MATERIALS

- **Bell**
- Student book
- Pencils
- Chart paper with graphic organizer, Planning a Play
- Markers and crayons
- Large drawing paper
- Various art supplies such as paint, paintbrushes, paper plates, aluminum foil, paper tubes, recyclable materials
- Computers, if available; if not, lined paper for composing scripts

LIFE SKILLS

Learn to Work	Learn to Live Together
Collaboration: • Respect for other opinions.	Sharing: • Effective management and organization of tasks.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Yesterday, you practiced conflict resolution skills. Remember, conflict resolution means finding a way to solve a problem between you and someone else. How would you solve this problem: A group of children cannot decide what game to play. Turn to your Shoulder Partner and share what you would do.**

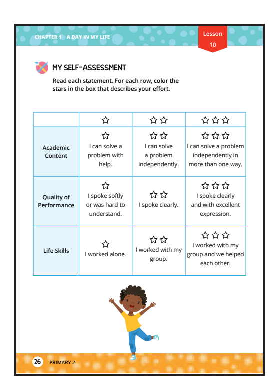
 STUDENTS DO: Share with a **Shoulder Partner**.

2. TEACHER SAY: **Today we will begin working on our Share project. We have been learning so much about solving problems and working with others. You will work together to create a play about a problem and how to solve it. Raise your hand if you have ever created a play before.**

 STUDENTS DO: Raise hands to answer.

TEACHER SAY: **Before we begin working on our project, we need to know what our goals are. After you perform your plays, you will assess yourself on how well you do. You will use a RUBRIC. Let's look at what parts of the play you will assess. Turn to page My Self-Assessment in your book. Looking at this rubric for the first time, how do you think you will record your assessment?**

 STUDENTS DO: Offer ideas.


CHAPTER 1 A DAY IN MY LIFE — Lesson 10

MY SELF-ASSESSMENT

Read each statement. For each row, color the stars in the box that describes your effort.

	☆	☆☆	☆☆☆
Academic Content	☆ I can solve a problem with help.	☆☆ I can solve a problem independently.	☆☆☆ I can solve a problem independently in more than one way.
Quality of Performance	☆ I spoke softly or was hard to understand.	☆☆ I spoke clearly.	☆☆☆ I spoke clearly and with excellent expression.
Life Skills	☆ I worked alone.	☆☆ I worked with my group.	☆☆☆ I worked with my group and we helped each other.

26 PRIMARY 2

TEACHER SAY: **Yes, you will color in stars. Let's learn more about how the rubric works. A rubric is a tool that tells you about the expectations of an assignment. The rubric will help you understand what you did well and what you might want to improve. This rubric has three rows. You will assess yourself on three parts of your work. Point to the rows as I read the titles: Academic Content, Quality of Performance, and Life Skills.**

 **STUDENTS DO:** Point to each row as it is mentioned.

TEACHER SAY: **Now, point to the column that has two stars at the top.**

TEACHER DO: Look around the room to confirm that students are pointing to the two-star column.

TEACHER SAY: **On this rubric, the column with two stars describes what you should be able to do. This is called "meeting the expectation." The column with one star describes what it will look like if you still have some work to do—you are approaching the expectation. The column with three stars means you have done better than the expectation.**

TEACHER DO: Read through the three boxes in each row, one at a time. Emphasize the middle box (the description that accompanies two stars), reminding students that this is the goal or expectation for their work. At the end, have three students read only the middle box of each row so that students hear one more time what they should be able to do during the project.

3. TEACHER SAY: **Now that we understand what is most important about our projects, let's prepare to work together. You may need to use some of the skills we practiced yesterday as you collaborate today.**

TEACHER DO: Hand out student books

TEACHER SAY: **Review your Peace Breaker or Peace Maker chart and your Strategies for Peace graphic.**

 **STUDENTS DO:** Read over pages.

4. TEACHER SAY: **It is time to get started working. Let's begin by planning the main parts of our play. On the page Planning a Play in your student book, you will find a graphic organizer to help your group plan.**

Note to Teacher: Create a version of the student book page as a large chart in front of the room. The graphic organizer is intended to help students divide up the work of creating a script, planning props, and designing scenery. As you **model** *for the class, make sure that groups have sufficient time to record ideas and ask clarifying questions.*

 **READ ALOUD:** **Discuss and record the topic of your play and ideas for the script, props, and scenery.**

TEACHER SAY: **The first line in the graphic organizer is labeled TOPIC. The topic is what your play is about. Remember, everyone will be creating a play about a common problem you might have and how you might solve it. For example, I will write that the topic of my play is about two friends fighting over a toy.**

TEACHER DO: Write example on the chart paper in the TOPIC box.

TEACHER SAY: **Let's brainstorm some more problems we might want to use.**

TEACHER DO: Use **Calling Sticks** to select four or five students to share.

 **STUDENTS DO:** Share ideas.

TEACHER SAY: **Now, share your ideas in your groups. Then work together to choose one problem for your play. Everyone in your group will write the same topic at the top of their own page.**



STUDENTS DO: Discuss topics for the play, choose one, and record.

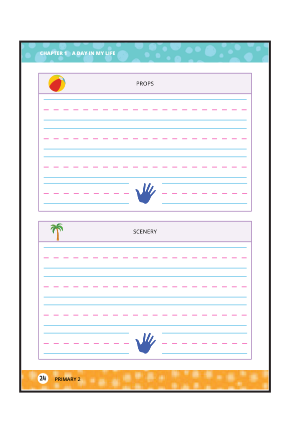
TEACHER DO: Allow students time to think and discuss in groups. Remind students to listen to all ideas and to use their peace maker strategies as they work.

TEACHER SAY: The box on your page is labeled SCRIPT. Who remembers what a script is in a play?

TEACHER DO: Call on students with raised hands to offer ideas.

TEACHER SAY: Good memories from your work on plays last year. A script tells the characters what to do and say. A few members of your group will write the script later today, but take a few minutes together to brainstorm and record a couple ideas for the script. In my example, my characters are fighting over who gets to play with a toy. I might write down that they are yelling, and I want one of them to say, "It is my turn!"

TEACHER DO: Write the words "yelling" and the sentence "It is my turn!" in the script box of your large graphic organizer to **Model** for the students.



TEACHER SAY: The next box is labeled PROPS. Props are objects used during your play. Let's think. If my characters are fighting over a toy, what prop would I need?

TEACHER DO: Use **Calling Sticks** to select two or three students to respond.

TEACHER SAY: If I did not have a toy I could use, how could I make a pretend one out of materials from the environment?

 **STUDENTS DO:** Share ideas on how to make a toy prop.

TEACHER SAY: Can you think of anything else my characters might need?

TEACHER DO: Use **Calling Sticks** to select three to five students to respond.

TEACHER DO: Write the word "toy," a note about how you could make one, and any other props suggested by students on the chart paper in the props box.

TEACHER SAY: In your groups, discuss what props you might need. Record ideas and notes about how you might make a prop in the PROPS section of your graphic organizer.

 **STUDENTS DO:** Share and record ideas for props to support the play.

TEACHER SAY: The final box on the page is labeled SCENERY. The scenery in a play is similar to the SETTING of a story. Who can explain what the SCENERY of a play is and give us an example?

TEACHER DO: Call on students with hands raised to offer ideas.

TEACHER SAY: The SCENERY of a play gives clues to the audience about where the play is taking place. Let's think more about how this works. I want my play about fighting over a toy to be set on a playground. But my play will be performed in the classroom. How could I show the audience that the characters are in a playground? Turn to your groups to share ideas, then raise your hands to share with the class.

TEACHER DO: Call on students with hands raised to offer ideas. Take notes on the large graphic organizer, and adjust your next comments to use students' ideas as examples.

TEACHER SAY: Those are great ideas. [Adjust to your students' answers: I could draw a large picture of a slide behind the students. I could also set up chairs so the characters can pretend they are swinging.] Now it is your turn. Think about the setting of your play. Does it take place at school? At home? In the car? At a table? In a park? Discuss with your groups and record your ideas.

 **STUDENTS DO:** Discuss and decide on scenery, recording ideas in their student books.

Note to Teacher: The next task for the student groups is to assign tasks. As this is the first major group project of the school year, you may need to do some **model***ing of how to divide up the work so that everyone has a job to do. This will work best in groups of at least four, with two students writing the script, one working on props, and the fourth student working on scenery. Adjust as needed for your class size. Ideally, students will make these decisions as a group, but you may need to assign some members roles if groups are struggling. Support groups in assigning roles by reminding to use peace maker strategies such as compromise.*

TEACHER SAY: For the rest of the day, we will be working on our plays. Our next step is to decide what part of the play each member of your group will work on. In your group, you need at least two people to write the script, one person to create props, and one to create scenery. First, think on your own about what you enjoy doing and do well. We call these your strengths. Are you a good writer? Do you love to draw? Do you like making things?

TEACHER DO: Provide students a minute of **Think Time**.

TEACHER SAY: Now talk to your group. Share your strengths and what part of the play you would like to work on. If too many people in your group like the same thing, use the compromise skills we practiced yesterday. Decide who will do what. When you know your role, circle the "hand up" at the bottom of the section you will work on.

 **STUDENTS DO:** Discuss strengths and assign team roles.

TEACHER DO: Circulate around the room to support students as needed.

5. TEACHER SAY: As we get ready to work, let's review what each role involves. Can everyone who is writing a script raise your hand?

 **STUDENTS DO:** Raise hands to designate who is writing the script.

TEACHER SAY: When you write a script, you need to list the person or character's name first, then write what they will say. For example, I might write the following: Ahmed: I love this new toy.

TEACHER DO: Model this for students using a new piece of chart paper or new board space.

TEACHER SAY: Then, I would think about what happens next. I would write, Mohammad: Is that a new toy? I like it. Let me see it. In parentheses, I would write an action that happens. For example, (takes toy and runs to the tree).

TEACHER DO: Write statements on chart paper.

Note to Teacher: If space allows, organize the room into three areas: script, props, and scenery. Have art supplies available for the props and scenery groups. If the space requires students to remain in table groups, distribute supplies around the room. Remind groups that members can help each other, but encourage students to stay focused on the role they have been assigned.

TEACHER SAY: The students working on props and scenery may use the art supplies. Be sure to use your peace maker strategies to share supplies and help each other work. I will stay with the script group to help answer questions about writing.

Note to Teacher: Introduce the **Ask 3 Before Me** *strategy so you may focus on working with the group writing the script. Students should work collaboratively to create props and scenery. If computers are available, students may type their scripts. If not, provide lined paper for the script writers.*

6. TEACHER SAY: We are going to use a new strategy in class today. It is called Ask 3 Before Me. If you have a question while you are working on props or scenery, please ask three other students for help before you come to me. For example, if I do not know how to draw a tree, I would ask two others. If I ask three people and no one can help me, then I can ask the teacher. Who can model this strategy for us?

 **STUDENTS DO:** Volunteer to **Model Ask 3 Before Me**.

TEACHER SAY: Very good. Everyone work on your special part in making a play. Please clean up your area when you are finished.



STUDENTS DO: Work to complete assigned parts of the group's play.

Note to Teacher: Sit with or stand near the students writing scripts to help prompt and guide them. Be sure you can easily monitor the rest of the class as they work. Tell the class how long they have to work and give students periodic updates as to how much time they have left. If you observe students getting off task, break up the work time by calling the class together to hear one or two students share about their work, then release students back to their tasks. Use a **Bell** *or prearranged signal to gather the students together before the end of class. Encourage students to clean up each area.*

TEACHER SAY: Thank you for cleaning up your areas. Please share with your row what you completed today.



STUDENTS DO: Share what was accomplished in rows.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we collaborated to create a play. Let's review what we accomplished today. What are the parts of a play?



STUDENTS DO: Raise hands to answer.

TEACHER SAY: Today we composed scripts and created props and scenery. As you were working together, did you compromise or use any other conflict resolution strategy? Share with your Shoulder Partner.

TEACHER DO: Allow students a moment to share observations with a partner, then use **Calling Sticks** to select four students to share with the class. Modify the number of students called upon based on the time you have left in class.

Lesson 9 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Rehearse a short play in groups. • Create props, scenery relevant to the plot of the play. • Offer feedback to peers.	• Improve • Feedback • Rehearse	• Student book • Pencils • Various art supplies such as colored paper, scissors, glue, markers, crayons, fabric, recycled materials • Timer or timing device on phone

LIFE SKILLS	
Learn to Work	Learn to Live Together
Accountability: • Provide effective feedback.	Communication: • Self-expression. • Reading, writing, non-verbal communication skills.



Share (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

Note to Teacher: If students need additional time to complete their script, props, or scenery, provide them time at the beginning of this lesson.

TEACHER SAY: **Yesterday, some of you wrote a script for your play. Who can describe a compromise you made in your group?**

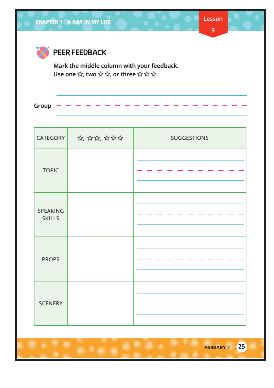


STUDENTS DO: Describe ways they compromised.

TEACHER SAY: **I am so proud of you for practicing your conflict resolution strategies. Today we are going to rehearse the plays that we created. Rehearse means to practice. You do not have to be perfect. In fact, today we are going to help each other improve. Improve is going to be an important word this year. Does anyone think they know what IMPROVE means?**

TEACHER DO: Call on one or two students with raised hands to answer.

TEACHER SAY: **To improve means to get better. Today you will rehearse your play in front of another group. Then you will practice giving helpful feedback to your classmates. Feedback means giving suggestions to help someone improve. Let's review how we will give each other feedback.**


CHAPTER 1 A DAY IN MY LIFE — Lesson 9

PEER FEEDBACK

Mark the middle column with your feedback.
Use one ☆, two ☆☆, or three ☆☆☆.

Group

CATEGORY	☆, ☆☆, ☆☆☆	SUGGESTIONS
TOPIC		
SPEAKING SKILLS		
PROPS		
SCENERY		

PRIMARY 2 25

TEACHER DO: Hand out student books and pair up groups to work together.

2. TEACHER SAY: **Turn to the page Peer Feedback in your student book. You will take turns rehearsing your plays. One group will be listening carefully and will help you improve. Then, you will listen to their play and give them feedback on how they can improve. It is important to listen carefully and provide helpful feedback. Let's practice that.**

TEACHER DO: Whisper a statement softly.

TEACHER SAY: Who can give me feedback about my speaking skill?

TEACHER DO: Use **Calling Sticks** to select a student to respond.

 **STUDENTS DO:** Respond, likely noting that the voice was too soft.

TEACHER SAY: Yes, my voice was too soft, and you could not hear what I said. I am not angry or hurt that you said that to me. It is simply a note about what I did. How could I improve?

TEACHER DO: Use **Calling Sticks** to select another student to respond.

TEACHER SAY: Yes, I could speak more loudly and clearly. That is good advice that will help me improve, thank you. Now, look at the Peer Feedback page in your student book.

 **READ ALOUD: Mark the middle column with your feedback. Use one star, two stars, or three stars.**

TEACHER SAY: Remember our rubric? Two stars means that you met the expectation—or you did a good enough job. One star means you have some work to do to improve. Three stars means that you did an extra good job, that you went beyond what was expected. Who can repeat what the stars mean?

TEACHER DO: Use **Calling Sticks** to select a student to respond.

 **STUDENTS DO:** Repeat the meaning of the stars.

TEACHER SAY: The first part of the other group's play you will give feedback on is the topic. Did the group discuss a problem and a way to solve it?

TEACHER DO: Hold up a copy of the page in the student book and point to each box as you explain.

TEACHER SAY: The second part is speaking skills. This is what we practiced when I whispered too softly. Ask yourself, did the group members speak too soft, too loud, or did they mumble? The final two categories are props and scenery. Did the props and scenery make sense for what was happening in the play? The group with a person whose birthday is closest to today will go first. Remember to record your feedback on the Peer Feedback page in your student book.



 **STUDENTS DO:** Determine which group practices first based on birthdays. Groups take turns presenting plays and recording feedback on the Peer Feedback page.

TEACHER DO: Circulate around the room clarifying tasks, answering questions, and observing students as they work. When all groups have rehearsed, call the class back together.

Note to Teacher: Use a timing device to help facilitate student work time. For example, allow five to seven minutes for the first group to rehearse their play, then five minutes for the other group to record feedback. While the listening group is recording feedback, encourage the performing group to self-assess and discuss what went well and what they can improve. Then switch places and repeat.

3. TEACHER SAY: Now that you have recorded some feedback for your partner group, take turns sharing your feedback. Please share what you liked best and give suggestions for what can be improved. For example, you might say, "I liked that your prop was a ____. It could be bigger so that the audience can see it better."



 **STUDENTS DO:** Share feedback and suggestions with each other.

TEACHER DO: Circulate around the room and listen to the feedback and suggestions given.

TEACHER SAY: It sounds like you have done some things very well and have a few things you could improve. You have the rest of the class time to make improvements and continue rehearsing in your original group.

 **STUDENTS DO:** Students make improvements and rehearse.

4. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we rehearsed and gave each other helpful feedback. What is something your group improved? Turn to a Shoulder Partner to share.

 **STUDENTS DO:** Discuss what they have improved with a **Shoulder Partner**.

TEACHER SAY: Tomorrow you will perform your play. What can you do to be ready? Let me use my Calling Sticks to choose students to answer.

TEACHER DO: Use **Calling Sticks** to select four students to share ideas on how to prepare for performing. Modify the number of students called upon based on the time you have left in class.

Lesson 10 Overview

LEARNING OUTCOMES

Students will:

- Perform a play demonstrating a problem and solution from daily life.
- Share performances with another school in Egypt (optional).

PREPARATION

Have each group organize their props and scenery in a specific area so they are ready to begin when called.

KEY VOCABULARY

- Performance
- Self-assessment

MATERIALS

- Student book
- Pencils
- Video recorder on cell phone or camera (optional)
- Student-created props and scenery

LIFE SKILLS

Learn to Work	Learn to Be
Collaboration: • Review individual behaviors within the team.	Communication: • Good listening.



Share (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Yesterday, you practiced your scripts and received feedback from your peers. I hope you were able to make improvements to your script, props, and scenery. Let's start the day by discussing how you improved your script, props, scenery, and performance.**

Use your fingers to show me how hard you worked to improve based on feedback from your peers. If you show one finger, it means you put in a little effort. Two fingers means you tried hard. Three fingers means you tried your very best and can demonstrate the improvements you made.

As I make statements, use your fingers to show me your thinking.

- **I improved my script based on something a friend in class suggested.**
- **I improved my props based on something a friend in class suggested.**
- **I improved my scenery based on something a friend in class suggested.**
- **I improved my performance based on something a friend in class suggested.**

TEACHER DO: Allow students to share thinking. Call out and praise students who are honest and vote "one finger," meaning they did not try very hard. Encourage them to be reflective and discuss how they could incorporate more feedback next time.

2. TEACHER SAY: **Thank you for thinking about your improvement. Next, we will have each group perform their play. Please remember to respect your classmates as they perform. We have been learning a lot about respect. Remember to show respect by being a good listener. Do not shout out or disturb your classmates as they perform.**

TEACHER DO: If you will be videotaping the plays, let the students know this and ask them to be extra quiet.





STUDENTS DO: Perform plays, listening respectfully to other groups' performances.

TEACHER DO: At the end of each play, call the next group to get ready to perform. As the next group gets set up, pose questions to the audience that they can discuss with a **Shoulder Partner**.

TEACHER SAY: Now turn to your Shoulder Partner and share how the group solved their problem. Ask your partner if they would have solved it the same way.

 **STUDENTS DO:** Share with a **Shoulder Partner**.

Note to Teacher: If you are able to videotape the performances, consider sharing the video with another classroom (teacher) or another school. If the other class is also in Primary 2, ask if you can see some of their videos as well. As a literacy extension, have students write thank you notes to the other class for sharing. (Take a picture of the notes to send digitally if you do not have a mailing address.)

3. TEACHER DO: Once students are finished with the performances, have them return to their seats. Distribute or have students take out their student books.

TEACHER SAY: Before we began the project of creating our plays, we looked at the rubric we would use to assess ourselves. Turn to the page My Self-Assessment in your book. Take a few moments to think quietly. Then complete the assessment.

 **READ ALOUD: Read each statement. For each row, color the stars in the box that describes your effort.**

TEACHER SAY: Let's do the first row together as an example. Look at the middle box with two stars in the row labeled Academic Content. Remember, two stars means you meet the expectation. Our plays were about solving problems. This box says "I can solve a problem independently." Is this true of you? If you usually need help solving problems, you would choose the single star in this row. If you can solve a problem by yourself in multiple ways, the box with three stars best describes you.

 **STUDENTS DO:** Choose which box best describes their ability to solve problems and color the stars in that box.



TEACHER SAY: Now complete the next two rows on your own.

 **STUDENTS DO:** Complete the self-assessment.

TEACHER DO: If needed to support student literacy levels, read the options out loud for the second row, and provide students time to make decisions and color the stars before moving to the final row. As they work, remind students that coloring the one-star box is okay—it just means they know where they need to improve.

4. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we shared our plays. Discuss with your Shoulder Partner your favorite part of this Share project.

 **STUDENTS DO:** Discuss the Share project with a **Shoulder Partner**.

TEACHER SAY: Who can describe or summarize what we have studied in this chapter? Let me use Calling Sticks to choose someone to answer.

TEACHER DO: Use **Calling Sticks** to select four students to share a summary and takeaways from the chapter. Modify the number of students called upon based on the time you have left in class. Have students thank their groups for working with them.

TEACHER SAY: Thank you for sharing with the class. In the next chapter, we will learn about ways we can be healthy and take care of ourselves.

Rubric Assessment (for teacher use)

	Approaching Expectation (1)	**Meeting Expectation (2)**	**Exceeding Expectation (3)**
Academic Content	Describes how compromise is used to solve a problem in the play with help. *Social Studies A.1.c*	Describes how compromise is used to solve a problem in the play. *Social Studies A.1.c*	Describes how compromise is used to solve a problem in the play and offers an alternative solution not already included in the play. *Social Studies A.1.c*
	Contributes to a script, props, or scenery that are not well matched to the topic of the play. *Drama B.2-4*	Contributes to a script, props, or scenery that are appropriate to the topic of the play. *Drama B.2-4*	Creatively contributes to a script, props, or scenery that match and enhance the topic of the play. *Drama B.2-4*
Quality of Performance	Speaks in a voice that may be difficult to hear and does not use expression and/or body language. *Speaking and Listening A.4.a.*	Speaks in a clear voice, with expression and body language appropriate for the scene. *Speaking and Listening A.4.a.*	Speaks in a clear voice, with expression and body language that enhances the scene. *Speaking and Listening A.4.a.*
	Creates props or scenery that are messy.	Creates props or scenery that are neat and well constructed.	Creates unique props or scenery that are neat, well constructed, and help to enhance the story.
Life Skills	Gives feedback that is general.	Gives feedback that is specific and relevant to the work.	Gives thoughtful feedback that is specific and relevant to the work and may offer a unique perspective.
	Listens to and respects others' opinions when frequently reminded, or talks over others to state own opinions.	Listens to and considers others' opinions in classroom discussions.	Listens to, considers, and voluntarily asks for others' opinions in classroom discussions.

PRIMARY 2

Multidisciplinary

WHO AM I?

Chapter 2: Taking Care of Me

Theme Overview

Taking Care of Me

COMPONENT	DESCRIPTION	LESSONS
Discover	Students discover how humans and animals grow and change and how body parts are specialized for certain functions. Students experience how engineering can help us meet our needs.	3
Learn	Students learn about food groups and how to make healthy choices in selecting foods to eat. Students explore habits that maintain health and ways to keep our food safe. Students create a tool to collect or clean a vegetable.	5
Share	Students collaborate to create a commercial advertising the tool or device they created.	2

Connection to Issues



Health and Population: We need to stay healthy. We can learn to improve our nutrition, health, and fitness. We are learning about our growing world population.

Life Skills Addressed



DIMENSION	DESCRIPTION
Learn to Know	**Critical Thinking:** • Define relationships between different objects. **Creativity:** • Organize parts to form a new or unique whole. **Problem-Solving:** • Analyze the parts of the problem.
Learn to Work	**Collaboration:** • Respect for other opinions. **Negotiation:** • Self-control. **Productivity:** • Setting clear goals.
Learn to Live Together	**Respect for Diversity:** • Solicit and respect multiple and diverse perspectives to broaden and deepen understanding. **Empathy:** • Demonstrate empathy in communicating with others. **Sharing:** • Effective management and organization of tasks.
Learn to Be	**Self-Management:** • Segment goals into specific steps. **Accountability:** • Provide effective feedback. **Communication:** • Good listening. • Self-expression. • Reading, writing, non-verbal communication skills.

Learning Indicators

Throughout this chapter, students will work toward the following learning indicators:

READING:

F. Reading Comprehension: Informational Text

1.a. Follow written instructions.
1.b. Ask and answer questions (who, what, where, when, why, and how) about key details in a text.

WRITING:

A. Foundational Skills

1.a. Write complete sentences.

C. Informational and Opinion

1.a. Write short, explanatory texts introducing a topic and using facts to develop details.
1.b. Write short texts expressing an opinion and providing at least one reason to support the opinion.

D. Process, Production, and Research

1.a. Use graphic organizers to plan writing.
2.a. Use a variety of digital tools to produce and publish writing, independently and in collaboration with peers.

SPEAKING AND LISTENING:

A. Foundational Skills

1.a. Participate in collaborative conversations with peers and adults about various topics and texts.
1.b. Follow agreed-upon rules for discussions.
2.b. Recount key ideas or details from a text read aloud or information conveyed orally.
4.a. Use intonation, facial expressions, and body language to express feelings and thoughts appropriate to the situation.

MATH:

D. Measurement and Data

4.a. Organize data with up to four categories into scaled bar and pictographs (scales limited to 2, 5, 10).
4.b. Solve simple put-together, take-apart, and compare problems using data presented in a bar graph or pictograph.

SCIENCES:

C. Life Science

1.b. Compare how different animals (including humans) use their external body parts in different ways (such as to see, hear, grasp objects, move, and eat).
1.c. Compare and explain the connection between animal parts and their function (such as various animal mouths and the type of food they eat).
1.d. Compare (including observing and describing) the life cycle of a variety of living organisms.

F. Engineering Design and Process

1.c. Develop an understanding of engineering design.
1.d. Develop an understanding of the role of troubleshooting, research and development, invention, and experimentation in problem solving.
1.e. Develop the abilities to apply the design process.
1.f. Develop the abilities to assess the impact of products and systems.

SOCIAL STUDIES:

A. Citizenship

1.b. Describe how making choices affects self, family, school, and community.

B. Environment, Society, and Culture

1.f. Identify defining cultural and environmental characteristics of specific places.

D. Human Systems

1.a. Describe ways that individuals and groups meet basic human needs.

VISUAL ART:

A. Producing Visual Art

2.a. Use various drawing and coloring tools to create art.
2.b. Create art that explores personal interests, questions, and curiosity.
2.c. Repurpose objects from the surroundings to make something new.
2.f. Collaborate to produce art with peers.

B. Presenting Visual Art

1.a. Present or display artwork produced by the students and discuss the work with peers.
1.c. Participate in producing and displaying a work of art (individually or collectively) relating to current events in home, school, or community life.

ECONOMICS AND APPLIED SCIENCES:

B. Childhood Development

1.a. Identify personal changes and abilities associated with growth.

C. Nutritional Health and Food Science

1.a. Identify food sources as either plant or animal.
1.b. Identify the food categories of a balanced diet.
1.d. Describe how a diverse diet contributes to health.
2.a. Explain how food health and safety influences welfare.
2.b. Identify and practice food health and safety habits that help stay healthy (such as cleaning hands and food).

VOCATIONAL FIELDS:

A. Career Social Skills and Preparation

1.b. Work cooperatively with another student to accomplish a task.
4.d. Develop simple products representative of various professions using materials from the environment.

INFORMATION AND COMMUNICATION TECHNOLOGIES:

C. Technological Production Tools

1.c. With support, use digital sources to search for and collect content to answer a specific question.

CH 2 Pacing Guide

LESSON	INSTRUCTIONAL FOCUS
1	**DISCOVER: Students will:** • Explain basic changes of human growth and development. • Compare and contrast life cycles of various living things (humans, animals, plants).
2	**DISCOVER: Students will:** • Identify external animal body parts and match to their functions. • Compare human and animal features and functions. • Explain how external body parts help us meet basic needs.
3	**DISCOVER: Students will:** • Analyze the importance of various body parts. • State an opinion with support. • Discover ways engineers can help people and animals.
4	**LEARN: Students will:** • Identify major food groups. • Identify food sources as either plant or animal. • Apply understanding of food groups to composing nutritious meals. • Describe how a diverse diet contributes to health.
5	**LEARN: Students will:** • Describe how making choices affects self, family, school, and community. • Categorize safe habits to maintain health. • Use mathematics to solve word problems.
6	**LEARN: Students will:** • Identify ways to keep food safe, including refrigeration, washing, expiration dates, clean tools/hands. • Communicate advice through images and words.
7	**LEARN: Students will:** • Describe the steps of the engineering design process. • Describe the importance of each step in the process. • Make connections to real life engineering examples.
8	**LEARN: Students will:** • Plan and design a tool or device to collect or clean vegetables. • Practice applying the engineering design process.
9	**SHARE: Students will:** • Improve a tool or device to collect or clean vegetables. • Create a commercial to share and explain the new tools.
10	**SHARE: Students will:** • Share tool for collecting or cleaning vegetables in a commercial. • Demonstrate good listening skills. • Communicate using persuasive techniques.

Materials Used

Student book

Pencils

Crayons

Venn diagram

Giraffe, crocodile, caracal, rabbit, frog, heron

Number cards (1 to 5)

Golden eagle beak, talon, eyes, wings

Six table "name tents" with food group labels

Chart paper

Markers

Pictures of food items

One item from each food group

Paper plates

Glue

Notebook

Chart paper with math problem

A root vegetable, such as a carrot, potato, or turnip.

Milk carton with an expiration date

Small bucket or tub with soil

Small bucket with clean water

Paper towel

Sponge

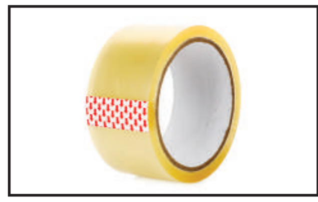
Old toothbrush



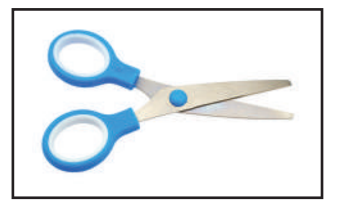
Construction paper



Tape



Scissors



Recyclable materials

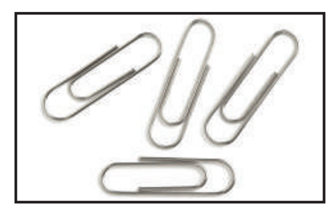
Popsicle sticks



Toothpicks



Paper clips



Pipe cleaners



Eggplant and spinach leaves

Cardboards



Script

Cardboard tubes



Recycled plastic bottles



Brushes



Yarn/string



Lesson 1 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Explain basic changes of human growth and development. • Compare and contrast life cycles of various living things (humans, animals, plants).	• Grow • Life cycle • Living things	• **Venn Diagram** • Student book • Pencils • Crayons

PREPARATION

Prepare a large **Venn Diagram** to display at the front of the room. The **Venn Diagram** should match what appears in the student book on the page titled Comparing Life Cycles.

LIFE SKILLS

Learn to Know

Critical Thinking:

- Define relationships between different objects.



Discover (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen. Encourage students to lead this routine as they become more comfortable.

This is a time to excite your students about the chapter. Tell them they are beginning a chapter of study called, "Taking Care of Me."

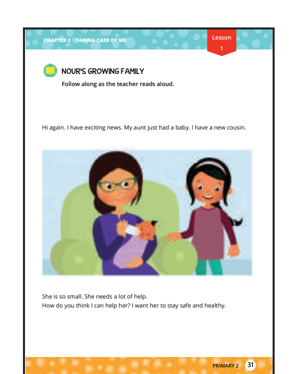
TEACHER SAY: We are starting a unit of study called "Taking Care of Me." What do you think we might learn?

TEACHER DO: Use **Calling Sticks** to choose three students to answer the question before continuing.



STUDENTS DO: Share ideas about the chapter title.

TEACHER SAY: In our first chapter, you learned about your job in your family and how you can solve problems in your life. Now, you will be learning about choices you can make to keep yourself healthy as you grow and change.



2. TEACHER DO: Hand out student books.

TEACHER SAY: At the end of this chapter, you will be designing a tool or device to help you prepare healthy food. You will work together to design and create this tool or device. As we prepare for our project, we will learn about HOW we eat, WHY we eat healthy food, and how we can make smart choices about WHAT we eat. Let's start with checking in on our friend Nour. Nour has exciting news to share with us. Open your student book to the page Nour's Growing Family.

TEACHER DO: Read text in student book. Encourage students to follow along using strategies such as following with a finger or silently mouthing the words.

TEACHER SAY: Let's think about what we read. How do you think Nour can help her aunt and

new baby cousin? Turn to a Shoulder Partner to share your ideas.

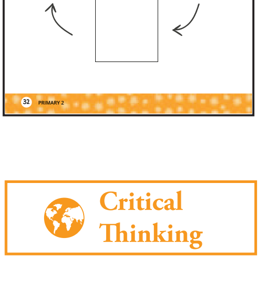
 STUDENTS DO: Share ideas with a partner.

TEACHER DO: Use Calling Sticks to have students share ideas of how to help the baby cousin. Ideas could include: helping to feed the baby, change clothes, bathing, carrying/holding, and so on. Prompt students to think of ways to keep the baby safe and healthy.

3. TEACHER SAY: **You named great ideas to help the new baby cousin grow and stay healthy. How many of you have younger siblings or cousins and remember them as babies?**

 STUDENTS DO: Raise hands to answer.

TEACHER SAY: **As you have seen, babies grow up. As we grow up, how do we change?**



TEACHER DO: Call on student volunteers to identify ways they grow and change as they get older.

TEACHER SAY: **Yes. We change by (name examples stated by students). As we grow and change, we go through a LIFE CYCLE. We learned about life cycles last year. Let's see what we know and remember. Turn to the next page in your student book titled The Baby's Life Cycle.**

TEACHER DO: Hand out crayons and pencils to students.

Note to Teacher: Use the following activity as a preassessment of student's prior knowledge of the human life cycle, which was taught in Primary 1. Ensure that students note that one box is labeled "baby" to use as a starting point for their drawings.

 READ ALOUD: **Draw pictures to show how Nour's cousin will grow and change.**



STUDENTS DO: Draw to show the baby's life cycle.

TEACHER DO: As students work, make note of misunderstandings of the life cycle that students might have. Address any misunderstandings as a whole class. If multiple students are drawing small increments of change, offer some age ranges to draw in the three remaining boxes, such as "child/ teenager, adult, and elder."

TEACHER SAY: **Thank you for drawing the baby's life cycle. Let's share what we drew using Hand Up, Pair Up. You will stand up, put up your hand, and find a partner to stand with. Then, you will share your life cycle pictures.**

 STUDENTS DO: Share life cycle pictures with a partner.

Note to Teacher: If necessary, review the human life cycle together as a class.



4. TEACHER SAY: **All living things have a life cycle. Can you repeat this sentence after me? All living things have a life cycle. The sentence we just said has two important concepts in it: LIVING THINGS and LIFE CYCLE. We have learned about both of these concepts before. Let's review them. First, how do you know if something is living? Turn to a Shoulder Partner and identify how you know if something is living.**

 STUDENTS DO: Share definition of a living thing with a Shoulder Partner.

TEACHER DO: Use Calling Sticks to have students share definitions or defining characteristics with the class. If misconceptions are shared, ask students clarifying questions. Summarize the definition and write it somewhere visible if needed.

TEACHER SAY: **A living thing is something that can grow, change, respond to the environment, and reproduce. Humans are living things because we grow and change, we can respond or react to our environment, and we have babies. Let's see how many other living things we can name in two minutes. We will use Popcorn to share.**

TEACHER DO: Call on a student to begin Popcorn. If a student names a non-living thing, interrupt the discussion to either ask the student to justify the choice (reviewing the criteria as a class if

needed), or ask another student whether he or she agrees or disagrees. In a quick round of review, unaddressed misconceptions could confuse the class.

STUDENTS DO: **Popcorn** to identify living things.

5. TEACHER SAY: You gave wonderful examples of living things. Let's listen to Nour share about a living thing she observed in front of her apartment. Open your book to the page Baby Birds and follow along as I read.

TEACHER DO: Read text in student book, then facilitate a discussion on the content of the story to deepen student understanding. Prompt students to consider what is happening in the story with questions such as:

- What did Nour see in the nest yesterday? What does she see now?
- What happened between yesterday and today?
- Why do you think the mother brings the babies food?

6. TEACHER SAY: Birds are living things. Birds can grow and change. Let's imagine how. We will explore the bird's life cycle. Turn to the next page in your book titled A Bird's Life Cycle.



READ ALOUD: Observe the bird's life cycle. What is happening between each stage?

TEACHER SAY: Point to the first stage of the life cycle.



STUDENTS DO: Identify the egg as the first stage of the life cycle.

TEACHER SAY: The first stage is the egg. What is the next stage?

TEACHER DO: Continue introducing the bird's life cycle, asking students to identify the stages and describe the differences between stages (the bird is growing up, growing in both size and skill or ability).

7. TEACHER SAY: We are learning a lot about how animals grow and change. Today we have seen two life cycles: one for a human and one for a bird. Let's compare the two. Turn to the page Comparing Life Cycles.



READ ALOUD: Use the Venn Diagram to compare the human and bird life cycles.

Note to Teacher: If this is the first time your students are using a **Venn Diagram***, take a moment to introduce and teach how to use the* **Venn Diagram***. Hang a* **Venn Diagram** *at the front of the classroom that matches the one in the student book. Explain how to record similarities in the center and differences in the two sides. You can adjust this learning experience to meet your students' needs, choosing to complete the entire page as a class or allow students to work with a partner.*

TEACHER SAY: The first stage for the bird is the egg. Is this the same or different from the human life cycle?





STUDENTS DO: Share ideas.

TEACHER DO: As students answer, **Model** recording their ideas of what is similar and different about the two first stages in the appropriate sections of the large **Venn Diagram**.

TEACHER SAY: Nice job comparing the first stages. Before continuing to complete the Venn Diagram, share your observations of other similarities and differences with a Shoulder Partner.

TEACHER DO: Provide time for students to share. Listen to conversations and ask questions to help guide discussions.



STUDENTS DO: Share comparisons with a **Shoulder Partner**.

TEACHER SAY: Now, fill in the Venn Diagram in your book. We will share as a class when you are finished.



STUDENTS DO: Independently work to complete the **Venn Diagram**.

8. TEACHER SAY: Thank you for completing your comparison. We can share our comparisons as a class. I will use Calling Sticks. If I call on you, you can share how the life cycles are the same or how they are different. Please tell me where to write your observation on my Venn Diagram.

TEACHER DO: Use **Calling Sticks** to complete the **Venn Diagram** as a class. As students add to the class diagram, prompt students to make comparisons about the changing abilities of a bird versus a human (walking vs flying, eating independently, and so on). Facilitate a discussion as a whole class. Suggested questions include:

- How do humans move as they grow older?
- Do humans learn how to fly?
- Who cares for the baby birds when they are young?
- Who cares for humans when they are young?

Note to Teacher: Students will complete the sentences at the bottom of the student book page as review at the beginning of the next lesson. If you have extra time in this lesson, feel free to complete the sentences now and have students read the sentences to a partner for review in the next lesson.

9. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we reviewed life cycles and compared the life cycles of a human and an animal. We observed a bird's life cycle today, but we identified other living things as well. Turn to a Shoulder Partner and discuss similarities and differences you can think of between humans and another animal's life cycle.

 **STUDENTS DO:** Share comparisons with a **Shoulder Partner**.

TEACHER SAY: Tomorrow we will learn more about something that helps us grow from one stage of the life cycle to the next. We will explore more of what living things NEED to survive.

Lesson 2 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Identify external animal body parts and match to their functions. • Compare human and animal features and functions. • Explain how external body parts help us meet basic needs.	• Function • Needs	• Student book • Pencils • Images of the following: giraffe, crocodile, caracal, rabbit, frog, heron • Number cards (1 to 5) for groups of students

LIFE SKILLS

Learn to Work

Collaboration:

- Respect for other opinions.

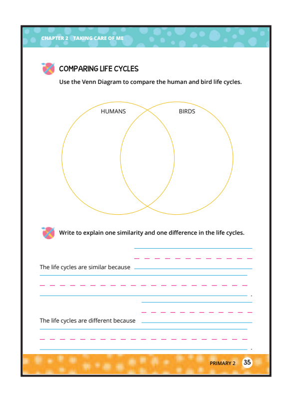


Discover (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen.

TEACHER DO: To review the previous lesson's content, have students begin this lesson with their student books open to the page Comparing Life Cycles.


CHAPTER 2: TAKING CARE OF ME

COMPARING LIFE CYCLES

Use the Venn Diagram to compare the human and bird life cycles.

HUMANS BIRDS

Write to explain one similarity and one difference in the life cycles.

The life cycles are similar because

The life cycles are different because

PRIMARY 2 35

TEACHER SAY: Yesterday, we discovered similarities and differences in life cycles. We completed a Venn Diagram to help organize our ideas. This format is helpful for our own learning, but if we want to share our ideas with others, this format might not make sense right away. Let's see if we can use the ideas in our Venn Diagram to write sentences comparing birds and humans.

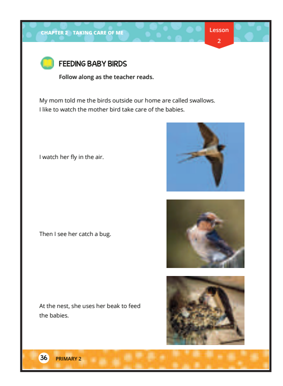


READ ALOUD: Write to explain one similarity and one difference in the life cycles.

TEACHER DO: Read the sentence starters. If necessary, orally **model** how to complete each sentence using information from the **Venn Diagram**. Allow students to work on the sentences independently. Modify the task as needed for students who may need additional support.



STUDENTS DO: Complete two sentences comparing the life cycles.


CHAPTER 2: TAKING CARE OF ME

Lesson 2

FEEDING BABY BIRDS

Follow along as the teacher reads.

My mom told me the birds outside our home are called swallows. I like to watch the mother bird take care of the babies.

I watch her fly in the air.

Then I see her catch a bug.

At the nest, she uses her beak to feed the babies.

36 PRIMARY 2

2. TEACHER SAY: Yesterday, Nour also introduced us to the new baby birds that live outside of her home. Let's learn more about how baby birds and other living things grow. Turn to the page Feeding Baby Birds in your student book. We have another story today about what Nour observes. As I read, try to answer the following question: What body parts help the birds eat?

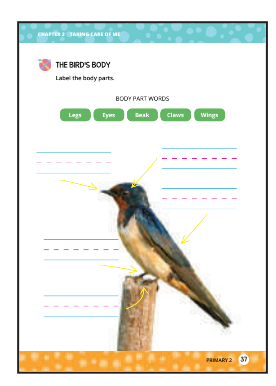
TEACHER DO: Read text in student book. Encourage students to follow along, using fingers to track the text and read silently with you.

TEACHER SAY: Turn and Talk to a Shoulder Partner. What body part do the birds use to eat?



STUDENTS DO: Share with a **Shoulder Partner**.

TEACHER DO: Use **Calling Sticks** to have students share ideas with the class, identifying the beak and possibly the wings on the bird.



3. TEACHER SAY: **That is right. The main body part the birds use to eat is the beak. There are other parts that also help them eat. Let's learn more about the parts of a bird. Turn to the next page in your book titled The Bird's Body. Point to the bird's beak.**

 STUDENTS DO: Identify the beak in the picture.

TEACHER SAY: **Great job finding the beak. I wonder what other body parts the bird has. Look at the picture with a Shoulder Partner and share body parts you can see on the bird.**

 STUDENTS DO: Name body parts with a **Shoulder Partner**.

 READ ALOUD: **Label the body parts.**

 STUDENTS DO: Label the external body parts of a bird.

Note to Teacher: If necessary, go over the names of the body parts with the class before allowing students to independently label. Students should have familiarity with external body parts from Primary 1.

TEACHER SAY: **Well done clearly labeling the bird's body parts. In the story we heard how the mother bird fed the baby birds using her beak. I have a thinking question for you. How did her other body parts help her obtain food and feed the baby birds? Listen to the story again and think about the body parts that helped the bird obtain food and feed the baby birds.**

TEACHER DO: Reread the story.

4. TEACHER SAY: **We are going to work in groups to discuss the different body parts. We will use a new strategy called Numbered Heads Together. You will work together to discuss the answers to my questions. Each member of the group will have a number. After you have had time to share in your group, I will call a number. That person from each group will stand up and be ready to share the group's answer. When we use this strategy, each member is responsible for knowing the group's answer. Who can explain how Numbered Heads Together will work?**

 STUDENTS DO: Volunteer to explain the new strategy.

TEACHER DO: Clarify how to use the strategy if necessary. Then, arrange students into groups of five and give each student a number 1 to 5.

TEACHER SAY: **Point to the wings on the bird. Talk to the members of your group about how the wings helped the bird obtain food.**

 STUDENTS DO: Discuss the function of the wings.

TEACHER DO: After providing time for students to share ideas, call a number between 1 and 5 and invite group members holding that number to share.

TEACHER SAY: **Yes, the wings help the bird fly in the air to find insects. The wings are important to help the bird move, but the wings also helped the bird obtain food. Now point to the eyes. How did the eyes help the bird obtain food?**

 STUDENTS DO: Discuss the function of the eyes.

TEACHER DO: After providing time for students to share ideas, call a number and invite group members holding that number to share.

TEACHER SAY: **Yes, the eyes helped the bird see and find the food. Body parts can serve many different functions. So far today we have been learning about body parts that birds use to eat. Let's explore a few more animals.**

5. TEACHER DO: Hang up images of the following animals around the room: giraffe, crocodile, caracal, rabbit, frog, heron.

TEACHER SAY: **Around the room I have placed images of six animals.**

TEACHER DO: Move around the room and name each animal. At each animal, state what the animal eats. The giraffe eats leaves on the tree. The crocodile eats fish and small animals. The caracal eats rabbits, gazelles, and birds. The rabbit eats grass and berries. The frog eats insects. The heron eats fish.

TEACHER SAY: We will move around the room in groups. When you get to a picture, discuss the body parts you see on the animal. Then Brainstorm how the body parts help the animal obtain food. Each group will have a colored marker. Your group will choose one body part you think is important for obtaining food and circle it with your marker. When we finish, we can share what we circled for each animal.



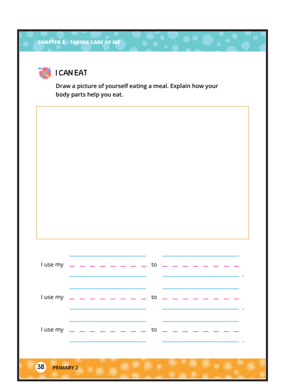
TEACHER DO: Put students into six groups. Give each group a different colored marker. Allow students to discuss each picture for two to three minutes before rotating to the next picture. Depending on time, have groups visit at least three of the animal images.

TEACHER SAY: Thank you for taking time to discuss your observations and ideas. Please return to your seats so we can discuss what we circled together.

6. TEACHER DO: Move the animal pictures to the front of the classroom. For each picture, invite the group that circled a body part to stand and share how the body part helps the animal obtain or eat food. Possible examples could be: ears on the caracal to hear prey approaching, long tongue on the frog to catch the insects, long neck on the giraffe to reach tall trees.

 **STUDENTS DO:** Explain the function of various body parts.

Note to Teacher: Help guide students thinking beyond just a mouth for eating. Obtaining food involves searching, hunting, and feeding young animals.


CHAPTER 2: TAKING CARE OF ME

I CAN EAT

Draw a picture of yourself eating a meal. Explain how your body parts help you eat.

I use my ________ to ________

I use my ________ to ________

I use my ________ to ________

38 PRIMARY 2

7. TEACHER SAY: Great job observing and discovering the various functions of the different animal body parts. Body parts can serve many different purposes. Yesterday we compared the life cycles of humans and birds. Let's think more about humans again now. Humans also have body parts we use to obtain food. Open your books to the page I Can Eat.

 **READ ALOUD: Draw a picture of yourself eating a meal. Write to explain how your body parts help you eat.**

 **STUDENTS DO:** Draw and write to show how they use their body parts to obtain food.

Note to Teacher: Students should write about more than just their mouth or teeth. They should mention hands for holding food or cutting food, arms for reaching, and so on.

8. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we talked about how body parts can help animals obtain food. Turn to a Shoulder Partner to share your drawing about how you obtain and eat food.

 **STUDENTS DO:** Share work with a **Shoulder Partner**.

TEACHER SAY: What do you think might happen if our body parts were different? What would change about how you eat if you had a beak? Let me use my Calling Sticks to choose someone to answer.

TEACHER DO: Use **Calling Sticks** to select students to share ideas.

TEACHER SAY: What would change about how we eat if we had wings instead of hands and arms?

TEACHER DO: Use **Calling Sticks** to select students to share ideas.

Lesson 3 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Analyze the importance of various body parts. • State an opinion with support. • Discover ways engineers can help people and animals.	• Engineer • Opinion	• Student book • Pencils • Images of body parts of the golden eagle: beak, talon, eyes, and wings

LIFE SKILLS

Learn to Live Together

Respect for Diversity:

- Solicit and respect multiple and diverse perspectives to broaden and deepen understanding.



Discover (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

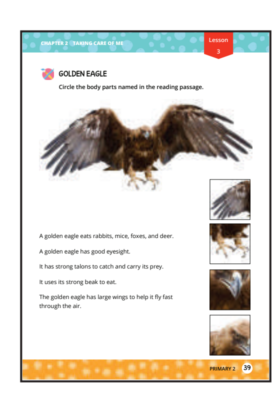
TEACHER SAY: **Yesterday, we observed animal body parts and discovered how they help animals meet their need for food. Let's see what we remember. Who can share a body part an animal uses to obtain food?**

TEACHER DO: Call on three or four students to identify a body part that an animal might use to obtain food.

 STUDENTS DO: Share body parts animals use to obtain food.

TEACHER SAY: **Great job remembering. Today we will discover connections between body parts and the types of food animals eat. Let's start by learning about a specific type of bird. Last year we learned about the Egyptian flag. Who remembers what bird is found on our flag?**

 STUDENTS DO: Raise hands to answer.



CHAPTER 2 TAKING CARE OF ME — Lesson 3

GOLDEN EAGLE

Circle the body parts named in the reading passage.

A golden eagle eats rabbits, mice, foxes, and deer.

A golden eagle has good eyesight.

It has strong talons to catch and carry its prey.

It uses its strong beak to eat.

The golden eagle has large wings to help it fly fast through the air.

PRIMARY 2 39

2. TEACHER DO: Hand out student books.

TEACHER SAY: **That is right, an eagle. Let's learn more about the Golden Eagle by reading a short article.**

 READ ALOUD: **Circle the body parts named in the reading passage.**

TEACHER DO: Read text in student book.

 STUDENTS DO: Circle body parts in the reading passage.

TEACHER SAY: Turn and share with a Shoulder Partner the body parts you heard about and how those parts help the golden eagle obtain food.

 **STUDENTS DO:** Share work and ideas with a **Shoulder Partner**.

TEACHER DO: After providing time for sharing with a partner, use **Calling Sticks** to have students identify for the class the various body parts used to obtain food. After each body part is named, ask the student what information about that part is given in the article. Then ask another student to explain how that body part helps the golden eagle obtain food and eat.

TEACHER SAY: The golden eagle uses many different body parts to eat. Each of the statements we read in the article are facts. These are statements that everyone can agree are true. We read that the golden eagle uses talons to eat. This is a fact. Look back at the story to find another fact. When I count to three, quietly Whisper another fact about the golden eagle.

 **STUDENTS DO: Whisper** a fact from the reading passage.

3. TEACHER SAY: Now I want to know your OPINION. An opinion means something that you think or feel. Everyone can have a different opinion. Here is the question I want you each to answer: Which body part do you think is the MOST important for the golden eagle to obtain food?

TEACHER DO: Provide **Think Time**. In four corners of the room, put up the following pictures: eagle talons, eagle wings, eagle eyes, eagle beak.

TEACHER SAY: We will use Four Corners to share our opinions of the most important body part for the golden eagle. I have put pictures of four of the eagle body parts around the room.

TEACHER DO: Point out and name the body parts around the room.

TEACHER SAY: When I say "Go," you will move to the picture of the body part you think is the most important for the eagle to obtain food. When you get to the picture, share with your classmates why you think this body part is important for the eagle. Ready? GO.

TEACHER DO: Release students to move to a body part image. Circulate as students discuss why they think a body part is important. Make sure students are justifying their opinions.



 **STUDENTS DO:** Discuss opinions and provide reasons.

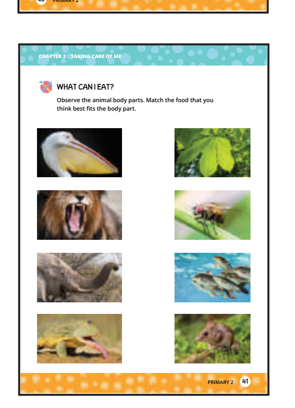
4. TEACHER DO: Move students back to their seats.

TEACHER SAY: I heard some wonderful conversations. Let's record our opinions so we can remember them. Open your books back to the page Golden Eagle.

 **READ ALOUD: Write your opinion. What is the most important body part for the golden eagle to obtain food? Write a reason to support your opinion.**

Note to Teacher: You can consider ***model****ing how to write an opinion sentence and a supporting sentence depending on your students' ability levels.*

 **STUDENTS DO:** Write an opinion statement.



5. TEACHER SAY: So far, we have been learning about what body parts help animals eat. I wonder if different body parts on different animals affect what they can eat. Let's explore some animal body parts and make connections to types of food. Open your book to the page titled What Can I Eat?

 **READ ALOUD: Observe the animal body parts. Match the food that you think best fits the body part.**

 **STUDENTS DO:** Complete the matching activity.

TEACHER SAY: Let's use Shake It Share It High Five to share our matches with our classmates. You will move around with your student book. See if you and a partner have made the same matches.



STUDENTS DO: Move around the room and share matches with partners.

6. TEACHER SAY: Wow. When you were studying the golden eagle, you discovered that there are a lot of body parts involved in eating food. While I was just listening to your conversations, I discovered two more things. First, animals eat lots of different foods. Second, there is often a connection between the body parts of animals and the kind of food they eat. Let's think more about this.



TEACHER DO: Facilitate a conversation with students to share the matches they made with the whole class. As students answer, ask them to explain the choice. Ask questions such as:

- What about the body part you named helps the animal eat the food you chose?
- Did any partners disagree on the correct matches? Please share your thinking.
- How did you resolve the disagreement?

TEACHER SAY: You are very careful observers. Imagine for a moment that the golden eagle did not have strong talons. How would that change what the eagle could eat? What would change if the eagle did not have a sharp beak?

TEACHER DO: Provide **Think Time** before prompting students to share ideas with **Shoulder Partners**.



STUDENTS DO: Share answers with a **Shoulder Partner**.

TEACHER DO: Use **Calling Sticks** to have students share as a whole class. Impacts on the eagle could include: without a sharp beak, the eagle would have to eat softer food like plants, or without sharp talons it could not catch a moving animal. Ask students if they can think of another example of how an animal's food would change if a body part were missing or different.



CHAPTER 2 TAKING CARE OF ME

MEET NATE CALVIN

Follow along as the teacher reads.

Nate Calvin is an engineer. An engineer is a person who works to solve real-life problems.

Mr. Calvin saw an eagle who was missing its sharp beak. He wanted to help.

Mr. Calvin wanted to make the eagle a new beak. He collaborated with other engineers. They drew plans for a new beak made out of plastic. They created the beak on a 3D printer. A dentist helped attach the beak to the eagle. Now the eagle can eat again.

42 PRIMARY 2

7. TEACHER SAY: Certain body parts are very important for animals to meet their basic needs, such as eating food. We discovered how important the eagle's body parts are to eating food. We also imagined how an eagle's food might change if a body part was changed. Let's meet an incredible person who was able to help an animal that was missing an important body part. Turn to the page Meet Nate Calvin.

TEACHER DO: Read the text in the student book. Facilitate a conversation to ensure students understand the reading passage. Prompt students with questions such as:

- What problem did the eagle have?
- Why was this a problem for the eagle?
- What idea did Nate Calvin have to help?
- Who else helped Nate Calvin?
- What do you think will happen next for the eagle?
- What do you think a 3D printer is? (If no students know, explain that a 3D printer is a machine that uses a material like plastic to create a 3D object.

TEACHER SAY: Turn and Talk to a Shoulder Partner about how Mr. Calvin helped the eagle meet its needs.



STUDENTS DO: Discuss with a **Shoulder Partner**.

TEACHER SAY: Engineers help design tools to solve real problems. At the end of this chapter, you will get a chance to solve a problem to help meet some of your own basic needs.

8. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we talked about how animal body parts are important to meeting basic needs. We discovered how an engineer could help animals with missing body parts. Turn and Talk to a Shoulder Partner about one new idea you discovered today.



STUDENTS DO: Discuss new ideas with a **Shoulder Partner**.

TEACHER SAY: Tomorrow we will begin to learn how we can make smart and healthy choices about the food we eat. What do you think it means to be healthy?

TEACHER DO: Use **Calling Sticks** to select four students to share thoughts on being healthy. Use this as a quick check for students' familiarity with the idea of health as related to food. Modify the number of students called based on the time you have left in class.

Lesson 4 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Identify major food groups. • Identify food sources as either plant or animal. • Apply understanding of food groups to composing nutritious meals. • Describe how a diverse diet contributes to health.	• Food groups • Nutrients • Nutritious • Serving • Variety	• Student book • Pencils • Six table "name tents" with food group labels (see Preparation) • Magazines and newspapers with pictures of food; use pictures printed from a computer if magazine pictures are not available • One food item from each food group (see Preparation); use pictures if real foods are unavailable • Chart paper • Markers • Crayons • One paper plate per row group • Glue

LIFE SKILLS	
Learn to Know	Learn to Be
Creativity: • Organize parts to form a new or unique whole.	Communication: • Good listening.

PREPARATION

Create table tents (fold paper to stand up on the table) with the following food group labels:

- Bread, Cereal, Rice, and Pasta Group
- Fruit Group
- Meat, Dry Beans, Eggs, and Nuts Group
- Milk, Yogurt, and Cheese Group
- Vegetable Group
- Fats, Oils, and Sweets Group

Collect magazines and newspapers with pictures of food or print pictures from the computer. Try to find at least one picture per one to two students in your classroom.

Create a chart titled "Food Pyramid" and draw or print a large copy of the food pyramid on the chart.

Place cut-out pictures of food all around the room for students to find. Be sure you have a variety of foods. It can be fun to place some pictures under a table or bench.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Yesterday, we talked about how animals meet their basic need for food. Today, we will think more about what WE eat. We are fortunate because we can eat many different foods. We will begin to learn how people make healthy food choices. Share with a Shoulder Partner a healthy food you eat at home.**

 STUDENTS DO: Share briefly with a **Shoulder Partner** a healthy food.

TEACHER DO: Use **Calling Sticks** to have a few students share ideas.

Note to Teacher: Use this brief discussion to preassess students' understanding of healthy food. In Primary 1 students learned about healthy foods and habits such as fruits, vegetables, and drinking water.

2. TEACHER SAY: Food gives our bodies energy. Does the type of food we eat matter? Could we stay healthy if all we ate, every day, was oranges? What if all we ate was candy? Share your thoughts with a Shoulder Partner.





STUDENTS DO: Share ideas.

TEACHER DO: Use **Calling Sticks** or call on volunteers to share ideas with the class. Ask follow-up questions, prompting students to explain their thinking.

TEACHER SAY: As we know, all food gives our bodies energy. But not all food is the same. Different foods have different nutrients for our bodies. NUTRIENTS are the parts of food that help our bodies grow, develop, and stay healthy. Our bodies need a VARIETY, or different foods to get all the nutrients we need. Let's learn more about food groups and nutritious meals so that we can make healthy choices. Let's start by naming some different foods.

TEACHER DO: Using either the actual food item or a picture of it, hold up a variety of foods, one at a time. Use **Calling Sticks** or raised hands to select students to name each item.



STUDENTS DO: Name the food item the teacher displays.

TEACHER SAY: I have six name tents. Each one describes a food group. A food group is a collection of foods that are similar in terms of their nutrients. Repeat after me as I place the name tents on the table.

TEACHER DO: Place the prepared name tents on a desk or table where all students can see. Read the name of each name tent as you place it on the table.



STUDENTS DO: Repeat the name on each tent after the teacher.

TEACHER SAY: Let's see if we can figure out which group each food we just named belongs in. I will use Calling Sticks to ask someone to place each food with the correct name tent.



STUDENTS DO: When called, match the food item with the food group name.

TEACHER DO: After all the foods are placed, ask the class to show **Thumbs Up** if they agree with the matches. Facilitate discussion as needed.

Note to Teacher: To make this more rigorous, if the student does not match each item correctly to the food group name, only tell the class how many are wrong, do not tell them which ones are wrong. Allow students ***Think Time****, then repeat until the foods match the labels correctly.*

TEACHER SAY: Thank you. Now we can see an example of a food that would fit in each food group. Let's practice some more. Can you figure out which group different foods fit into?

3. TEACHER DO: Hand out student books and crayons. Hold up the page, Food Groups.



READ ALOUD: Using the table below, color the foods according to food group.

RED	YELLOW	BROWN	GREEN	ORANGE
Meat, Dry Beans, Eggs, and Nuts Group	Milk, Yogurt, and Cheese Group	Bread, Cereal, Rice, and Pasta Group	Vegetable Group	Fruit Group



STUDENTS DO: Color the foods according to the colors in the directions.

TEACHER DO: Circulate around the room assisting students, clarifying line drawings as needed. This learning experience can be used as a formative assessment for how well students understand the food groups.

TEACHER SAY: Share your completed work with a Shoulder Partner. Make corrections if needed. If you and your partner do not agree, explain your reasoning and see if you can come to an agreement.

 **STUDENTS DO:** Share completed work and make corrections if needed.

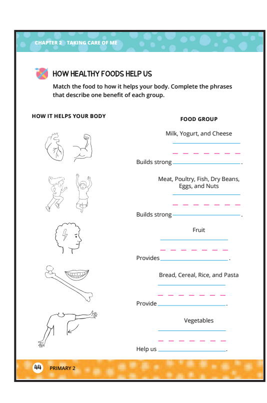
4. TEACHER SAY: Plants and animals supply the food we need to keep our bodies healthy. Next, identify each food as coming from either a plant or from an animal. Write the letter P next to the food if it comes from a plant and the letter A if it comes from an animal.

 **STUDENTS DO:** Write P for plant and A for animal next to the foods.

TEACHER SAY: Share your completed work with a Shoulder Partner. Make corrections if needed.

 **STUDENTS DO:** Share completed work and make corrections if needed.

TEACHER DO: Circulate around the room assisting students, clarifying as needed.


CHAPTER 2 TAKING CARE OF ME

HOW HEALTHY FOODS HELP US

Match the food to how it helps your body. Complete the phrases that describe one benefit of each group.

HOW IT HELPS YOUR BODY

FOOD GROUP

Milk, Yogurt, and Cheese

Builds strong ______.

Meat, Poultry, Fish, Dry Beans, Eggs, and Nuts

Builds strong ______.

Fruit

Provides ______.

Bread, Cereal, Rice, and Pasta

Provide ______.

Vegetables

Help us ______.

44 PRIMARY 2

5. TEACHER SAY: Well done. You already know a lot about the food that you eat. You also know that it is important to eat healthy foods to fuel our bodies. Let's imagine that Nour is trying to help her younger brother learn about healthy choices. Open your student books to the page How Healthy Foods Help Us. What can Nour tell her brother about how food helps our bodies?

 **READ ALOUD: Match the food to how it helps your body.**

TEACHER SAY: Listen carefully as I describe how a food group helps our bodies be healthy. First, draw a line from the food group to the picture that describes how it helps our body. We will complete the sentences later.

 **STUDENTS DO:** Listen to descriptions and match foods to their benefits.

TEACHER DO: Read the following statements, then pause after each to give students time to find the match described.

- Foods in the Milk, Yogurt, and Cheese Group help make our bones and teeth strong.
- The Meat, Poultry, Fish, Dry Beans, Eggs and Nuts Group helps build and repair our muscles.
- Fruits have important vitamins to help us stay healthy.
- The Bread, Cereal, Rice, and Pasta Group helps give us the energy we need every day for thinking, playing, and learning.
- Vegetables help us digest food and get rid of waste in our body.

TEACHER SAY: Turn to your Shoulder Partner to check your matches.

 **STUDENTS DO:** Check matches with a **Shoulder Partner**.

TEACHER SAY: Now, let's see if we can complete the phrases for each food group. Let's do this together. Under the picture of milk and cheese, the phrase begins "builds strong ________." What word do you think completes this phrase?

 **STUDENTS DO:** Share ideas.

TEACHER DO: Take multiple answers, then decide which word is best (bones or teeth). Write the full phrase on the board or chart paper, underlining the new word. Allow time for students to copy the words onto the student book page. Repeat this process for each of the food groups on the page.

TEACHER SAY: Well done. Each of these food groups help keep our bodies healthy. HOW MUCH of each group we eat every day is also important.

6. TEACHER DO: Refer to premade chart paper with the Food Pyramid on it. Explain the information that is on the chart. Ask students the following questions, using **Calling Sticks** to select students to answer.

TEACHER SAY: This chart, called the Food Pyramid, can help us make healthy choices. The chart shows how many servings of each food we should have in a day. A serving means a certain amount.

- **Which food group should we have the most servings of each day?** (Student should respond that the Bread, Cereal, Rice, and Pasta Group suggests 6 to 11 servings a day.)
- **How many servings of the Meat, Poultry, Fish, Dry Beans, and Nuts Groups should we have each day?** (2 to 4 servings a day)
- Ask the same question (How many servings of ____ should we have each day?) for each remaining food group.

TEACHER DO: Hand out a paper plate to each row. Place glue in an area available to the groups.

7. TEACHER SAY: This chart will help us choose healthy foods to eat. In your group, you will go on a scavenger hunt for pictures of food. I have placed pictures of different foods all around the room. Your row will collect pictures of food and create a healthy meal. You may choose a healthy breakfast, lunch, or dinner. Look at the Food Pyramid chart to make sure you have a variety of food.

Note to Teacher: Dismiss one row at a time to avoid students running for pictures. Encourage rows to collaborate and trade pictures if needed.

TEACHER DO: Allow students time to move around the room and collaborate with other rows as needed. When finished, use a **Bell** or other signal to come back together as a class.





STUDENTS DO: Find pictures of a variety of food to create a healthy meal. Collaborate to get pictures needed .

TEACHER SAY: Thank you for moving nicely around the room and using your collaborating skills to trade pictures. Now that you are back in your groups, take turns gluing your pictures onto your plate to create a healthy meal.



STUDENTS DO: Glue pictures onto paper plates.

TEACHER SAY: When I point to your row, please share what is on your plate. Tell us the names of the food groups and how many servings of each are in your meal.



STUDENTS DO: Share healthy meal plates with the class.

Note to Teacher: Collect the plates and display in the classroom. They can be placed on a bulletin board or hung by string from the ceiling.

8. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we identified food groups and how to create a healthy meal using the Food Pyramid. Let's Popcorn to review. I will say a food, then call someone to tell me the food group. That person will say a food, then call on someone else to name the food group and so on.

TEACHER DO: Call on a student to start.



STUDENTS DO: Popcorn to share examples of food and food groups.

TEACHER SAY: Thank you for working hard today.

Lesson 5 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Describe how making choices affects self, family, school, and community. • Categorize safe habits to maintain health. • Use mathematics to solve word problems.	• Category	• Student book • Pencils • Notebook or scrap paper • Chart paper with math problem

PREPARATION

Write the first math problem on the student book page Solving Problems on chart paper.

LIFE SKILLS

Learn to Know	Learn to Be
Problem-Solving: • Analyze the parts of the problem.	Communication: • Reading, writing, nonverbal communication skills.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Yesterday, we talked about food groups and how to plan a healthy meal. We learned that the choices we make about food affect our health. Today we are going to move away from the topic of food to think more about how the choices we make affect others in our families, school, and community.**

2. TEACHER DO: Hand out student books and direct students to open to the page Making Choices.

TEACHER SAY: **We are going to read a new story about our friend Nour.**



READ ALOUD: **Listen for choices Nour and her sister make. When you hear a choice, show Thumbs Up. Consider how each choice affects other people.**

TEACHER DO: Read the text in the student book. Pause when students show Thumbs Up to discuss the choice being made and how it can affect other people. Examples include playing music too loudly (disturb others), eating vegetables (promote health and save money), playing safely outside (take care not to break a window), and going to bed on time (promote health).



STUDENTS DO: Follow along as the teacher reads, giving a Thumbs Up to identify when Nour or her sister make a choice that may affect someone else.

TEACHER SAY: **As we read, you were able to identify different choices in Nour and her sister's daily routine. Think about choices you have made and who might have been affected. We are going to use a new strategy called Snowball Fight. It will be fun to pretend we have snow in Egypt. Give me a Thumbs Up if you have ever seen snow.**



STUDENTS DO: Show a Thumbs Up if they have seen snow.

3. TEACHER DO: Hand out a half-sheet piece of paper to each student.

TEACHER SAY: Write down a choice you have made that has affected others. I am going to write, "I dropped trash on the sidewalk." Please write neatly.

 **STUDENTS DO:** Write a choice they have made on a piece of paper.

TEACHER SAY: Next, crumple your paper into a ball like this. (Model for the students.) Now it looks like a snowball. Let's have a snowball fight. Toss your paper snowball across the room.

 **STUDENTS DO:** Toss wadded-up paper balls across the room.

TEACHER SAY: Now, pick up the paper snowball that landed closest to you. Do not toss it this time. You are going to open and read it.

 **STUDENTS DO:** Pick up a nearby paper snowball.

TEACHER SAY: Read the sentence, then write who you think it might affect. For example, if you picked up my snowball that said I dropped trash on the sidewalk, you could write that people walking by or a nearby business might be affected.

 **STUDENTS DO:** Read the snowball and write who the choice might affect.

TEACHER SAY: Now, crumple your snowball and toss it again.

 **STUDENTS DO:** Crumple paper and toss paper snowballs.

TEACHER SAY: Pick up the paper snowball closest to you, read the statement, and write someone else it might affect.



 **STUDENTS DO:** Read the new snowball and write who might be affected.

TEACHER SAY: Toss your paper snowballs one more time and pick one up. This time, read the statement and responses to your Shoulder Partner.

 **STUDENTS DO:** Read the statement and responses to a **Shoulder Partner**.

TEACHER DO: Listen to students as you circulate around the room.

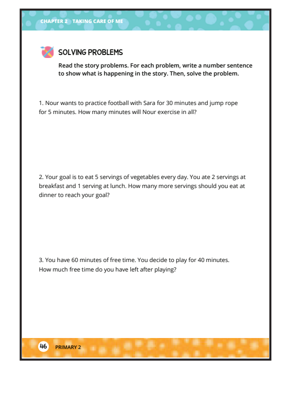
TEACHER SAY: I am glad you had fun having a snowball fight. Please place your paper snowballs in the trash (or recycling) bin.

 **STUDENTS DO:** Dispose of paper properly.

Note to Teacher: If recycling bins are available, instruct students to recycle their papers. Use conversations you heard as you circulated around the room to discuss some of the choices.

TEACHER SAY: I heard you discuss how some choices can affect others. Sometimes, your choices affect your family, your school, or your community. Many of our choices also affect our own health. Yesterday we talked about food choices. Nour's story talks about other choices and habits that can keep us healthy. Let's think about three main categories: diet (or the food you eat), exercise, and sleep habits.

TEACHER DO: Ask students to share an example of a choice in each of the categories by using **Calling Sticks** to select students to answer.


CHAPTER 2 TAKING CARE OF ME

SOLVING PROBLEMS

Read the story problems. For each problem, write a number sentence to show what is happening in the story. Then, solve the problem.

1. Nour wants to practice football with Sara for 30 minutes and jump rope for 5 minutes. How many minutes will Nour exercise in all?

2. Your goal is to eat 5 servings of vegetables every day. You ate 2 servings at breakfast and 1 serving at lunch. How many more servings should you eat at dinner to reach your goal?

3. You have 60 minutes of free time. You decide to play for 40 minutes. How much free time do you have left after playing?

46 PRIMARY 2

 **STUDENTS DO:** Share examples of each category with the class.

4. TEACHER SAY: Thank you for sharing some healthy choices you can make. Did you know that sometimes we need math to help us make healthy choices? We can use mathematics to figure out how much time we have to spend on healthy activities. We can also use math to plan healthy meals. Let's practice. Open your student books to the page Solving Problems.

 **READ ALOUD: Read the story problems. For each problem, write a number sentence to show what is happening in the story. Then, solve the problem.**

TEACHER SAY: Let's read the first story and solve the problem together. I will describe what I am thinking as I try to solve the problem.

Note to Teacher: Metacognition, or talking out loud about your thinking, is a powerful skill to **Model** *for students. Students should also be encouraged to talk out loud about their thinking when appropriate. Teachers can often assess misconceptions by listening to what a student was thinking when they attempted to solve a problem.*

TEACHER DO: Read the first problem aloud and **Model** how to turn the story into a math problem, solve the problem, then answer the question. Use chart paper to **model** strategies such as circling important parts of the problem or drawing pictures or symbols.



READ ALOUD: Nour wants to practice football with Sara for 30 minutes and jump rope for 5 minutes. How many minutes will Nour exercise in all?

TEACHER SAY: First, I want to think about the question. What do I want to know? Give me a Thumbs Up if you know what we are trying to find out.



STUDENTS DO: Show **Thumbs Up** and share ideas if selected.

TEACHER SAY: Yes, I am trying to find out how many minutes Nour exercised. I will circle the question.

TEACHER DO: Circle the question.

TEACHER SAY: The question says, "in all." That makes me think I need to put together the time Nour spent practicing football with the time she spent jumping rope. Give me a Thumbs Up if you know what number sentence I should write.



STUDENTS DO: Show **Thumbs Up** and share ideas if selected.

TEACHER DO: Call on a student with a thumb up to orally provide the math sentence. Write 30 + 5 = ______ on the board.

TEACHER SAY: Now we are ready to solve our problem. Who knows the answer?



STUDENTS DO: Raise hands to volunteer an answer.

TEACHER SAY: Well done. Thirty plus five equals 35, so Nour exercised for 35 minutes. As you complete the rest of the problems yourself, you will do exactly what I did: Figure out what the story problem is asking and what information it provides. You can use strategies such as circling important parts of the story problem, drawing pictures, or drawing symbols as you work.





STUDENTS DO: Complete problems 2 through 5 independently.

TEACHER DO: Circulate around the room assisting students as needed. Encourage students to think out loud to you if they appear stuck on a problem. Refer students to the 120 Chart in the calendar math area or the math Apply Books as needed. Problems 2 through 5 may be used as a formative assessment.

TEACHER SAY: Thank you for your hard work. Now, let's learn from each other. I will use Calling Sticks to select a student to tell us how they solved each problem. Sometimes we approach problems in different ways. If we get stuck, someone else's approach can help us.

TEACHER DO: Use **Calling Sticks** to select students to describe how they solved the problem.



STUDENTS DO: Answer problems and explain their thinking.

TEACHER DO: Repeat for each problem. Allow time for discussion if other students want to share thinking that is different.

5. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: **Today we talked about ways our choices can affect others and we practiced using mathematics to help us solve problems about healthy choices. How do you think math can help us make healthy choices?**

 STUDENTS DO: Share ideas and examples.

Lesson 6 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Identify ways to keep food safe, including refrigeration, washing, expiration dates, clean tools/hands. • Communicate advice through images and words.	• Expiration • Spoil	• Student book • Pencils • Milk carton with an expiration date • A root vegetable, such as a carrot, potato, or turnip • Small bucket or tub with soil • Small bucket with clean water • Paper towel • Sponge • Old toothbrush • Chart paper for groups of students • Markers • Crayons

LIFE SKILLS		
Learn to Know	Learn to Work	Learn to Be
Problem-Solving: • Analyze the parts of the problem.	Collaboration: • Respect for other opinions.	Communication: • Reading, writing, non-verbal communication skills.

PREPARATION

Place a vegetable (preferably a root vegetable, such as a carrot or potato) into a small bucket with soil. Cover it well. Have another small bucket of clean water, a paper towel, a sponge, and an old toothbrush next to it.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Yesterday, we talked about healthy choices and how your choices can affect your family, school, and community. Tell me some choices that can affect your classmates. I will choose a Calling Stick to select the first student, then you will Popcorn to the next person.**

TEACHER DO: Use Calling Sticks to select first student to respond.

 STUDENTS DO: Share choices that can affect classmates when selected.

2. TEACHER SAY: **In this chapter, we have identified food groups and looked at a chart that tells us how many servings of each food group we should have each day to stay healthy. We have learned that fruits and vegetables are very important for health. One extra challenge with fruits and vegetables, though, is that they have to be eaten before they go bad. Have you ever seen a spoiled, or over-ripe, banana? What did it look like?**

 STUDENTS DO: Share ideas or experiences.

TEACHER SAY: **When they do not get eaten in time, bananas get black spots on the peel and begin to smell bad. Eating food that is not fresh can make us sick. What are some other ways we know food is not fresh?**

TEACHER DO: Give students Think Time. Then use Calling Sticks to have students share ideas.

 **STUDENTS DO:** Share ideas about ways we know food is not fresh.



TEACHER SAY: When food in a package (like snacks or milk) spoils, or goes bad, we say that it is expired. Everyone, repeat the word expired . Some foods have an expiration date stamped on their container. For example, a milk carton has an expiration date stamped on it.

TEACHER DO: Pass around a milk carton with an expiration date if possible.

TEACHER SAY: It is important to check the expiration date before we eat or drink. Raise your hand if you can think of some other foods that have an expiration date?

 **STUDENTS DO:** Share name of foods with expiration dates.

TEACHER SAY: Expiration dates can keep us healthy. They tell us when food is not fresh. What are some other ways we can stay healthy in the way we prepare or eat food? Turn and share with a Shoulder Partner.



 **STUDENTS DO:** Share ideas.

TEACHER DO: Walk around and listen to student conversations for parts you can refer to next. Adjust your next comments based on what you overhear.

3. TEACHER SAY: Well done. I heard some of you say you need to clean your hands before touching food. Dirt and germs can easily move from our hands to our food. Some people said that some food needs to be kept in the refrigerator. Food like milk, meat, and eggs should be kept in a refrigerator. I even heard some people say that cleaning tools you cook is important. Many of our vegetables come from the ground. What do we need to do to make sure they are safe to eat?

TEACHER DO: Use **Calling Sticks** to ask two or three students to respond.

 **STUDENTS DO:** Share ideas.

TEACHER DO: Pass out student books.

TEACHER SAY: You had some good ideas. Let's test a few ways we can clean vegetables to see what works best. Please open your student book to the page, Cleaning Vegetables.

TEACHER DO: Show students the bucket with soil. Have the paper towel, sponge, toothbrush, and small bucket of water nearby. Adjust the learning experience based on the materials you have available.

TEACHER SAY: I have buried a vegetable in the soil. I will use Calling Sticks to select a student to come remove it from the soil.

 **STUDENTS DO:** Remove vegetable from the soil.

TEACHER SAY: Look how dirty the vegetable is.

 **READ ALOUD: Draw a "before" picture of the vegetable as it comes out of the soil.**

 **STUDENTS DO:** Draw a picture of the vegetable.

TEACHER SAY: We are going to use a few tools to clean this vegetable. After each tool, you will decide how dirty or clean the vegetable is, and record your observation.

TEACHER DO: Explain how to record observations on the scale given from very dirty to very clean given in the student book. Provide support as needed for students to mark answers on the scale and record the names of tools and each associated number as needed.

TEACHER SAY: First, let's try using a paper towel to clean it.

 **STUDENTS DO:** Use dry paper towel to try cleaning the vegetable.

TEACHER SAY: Do you think all the dirt is off? Raise your hands if you think the vegetable is clean.

 **READ ALOUD: Mark a 1 on the line to show your answer after using the towel.**

 **STUDENTS DO:** Raise hands to vote.

TEACHER DO: Use **Calling Sticks** to select more students to attempt cleaning the vegetable with other tools available (such as a sponge, towel, toothbrush, and so on). After each attempt, ask students to raise hands or show **Thumbs Up** to vote on whether the vegetable is clean, and record observations on the scale in the student book.

TEACHER SAY: We have used a number of tools to clean this vegetable. I will pass it around so that you can look closely. Do you think it is completely clean now?

 **STUDENTS DO:** Share observations.

TEACHER SAY: Many of you think our vegetable is now clean. Let's test one more tool. I will gently dip the vegetable in the water. We can see if any more dirt comes off.

TEACHER DO: Rinse the vegetable in the tub of water. Use **Calling Sticks** to ask a student to come up and check the water to see if any soil is visible.

 **STUDENTS DO:** Examine the vegetable and the water for soil.

TEACHER SAY: At the top of the page, there is another box for a drawing.

 **READ ALOUD: Draw an "after" picture after using all of the cleaning tools.**

 **STUDENTS DO:** Draw an "after" picture.

TEACHER SAY: Your last task is to complete the sentence at the bottom of the page. The sentence begins, "Cleaning vegetables that grow in the ground is important because_____." Complete the sentence, then share your idea with your Shoulder Partner.



 **STUDENTS DO:** Complete the sentence and share with a **Shoulder Partner**.

TEACHER SAY: Food that grows in the ground must be cleaned properly to keep us safe and healthy. We can see that certain tools may help more than others. In your Share project, you will be designing a tool or device to collect or clean vegetables. Based on what we just observed, take a minute to discuss an idea you have with a Shoulder Partner.

 **STUDENTS DO:** Share an idea about a tool or device to clean vegetables.

4. TEACHER SAY: Thank you for sharing your ideas. We will have some more time to think about this tomorrow. Now, let's make some posters to share what we have learned about food safety.

TEACHER DO: If possible, tell students that they can hang the posters around the school for other students and teachers to learn from. Divide the class into small groups, randomizing with a 1-2-3 count off if desired. Hand out the chart paper, crayons, and markers to each group.

TEACHER SAY: Your task is to create an informative poster that shares ways you can stay healthy when preparing and eating food.



 **STUDENTS DO:** Collaborate in small groups to create posters.

Note to Teacher: As you circulate around the room, prompt students to think about refrigeration, expiration dates, cleaning hands, cleaning tools, and cleaning foods that come from the ground. Posters may be used for formative assessment and may be displayed in the hallways to share with the school.

5. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Thank you for helping others stay healthy and make good choices. What is one idea that you will share at home? Discuss with a Shoulder Partner.

 **STUDENTS DO:** Discuss ideas to share at home.

Lesson 7 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Describe the steps of the engineering design process. • Describe the importance of each step in the process. • Make connections to real life engineering examples.	• Engineer • Engineering design process	• Student book • Pencils • Two sheets of construction paper per pair of students • Glue or tape • Scissors

LIFE SKILLS

Learn to Live Together	Learn to Work
Respect for Diversity: • Solicit and respect multiple and diverse perspectives to broaden and deepen understanding. Empathy: • Demonstrate empathy in communicating with others.	Collaboration: • Respect for other opinions. Negotiation: • Self-control.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Yesterday, we talked about to how to be healthy in how we keep and clean food. What is one new thing you learned yesterday? Turn to your Shoulder Partner and share.**

 STUDENTS DO: Share ideas.

TEACHER SAY: **Making healthy choices about the food we are eating is very important. Tomorrow you will be designing a way to make sure your vegetables are clean and ready to eat. In order to effectively design a new tool, there are steps we need to take. Do you remember using specific steps to design something last year? I will call on volunteers to share what they remember.**

 STUDENTS DO: Share what is recalled about the design process.

TEACHER DO: Listen as students share and make note of gaps in understanding to clarify throughout today's lesson.

2. TEACHER DO: Hand out student books.

TEACHER SAY: **The steps we take in designing something have a name. They are called the engineering design process. The engineering design process is a set of steps people can use to help develop solutions to a problem. Who remembers the engineer we met earlier in our chapter? What did he design?**

 STUDENTS DO: Share ideas from memory.

TEACHER SAY: Yes, we met Mr. Calvin, who designed a new beak for an injured eagle. Turn back to the page Meet Nate Calvin. Let's reread the story to remind ourselves of the work he did.

TEACHER DO: Reread the page Meet Nate Calvin.

Note to Teacher: You can also consider looking up an online article about Nate Calvin to read with students in order to provide more information on how he developed the eagle beak.

TEACHER SAY: Mr. Calvin used the design process to help develop a solution to a problem. What problem did Mr. Calvin need to solve? Turn to a Shoulder Partner to identify the problem.

 **STUDENTS DO:** Identify the problem Mr. Calvin solved.

TEACHER SAY: The problem was that the eagle needed a beak, so he could drink and eat food. After Mr. Calvin identified the problem, he followed more steps to develop a solution. Open your books to the page Engineering Design Process. You can see a picture showing the steps in the process. Point to each step as I read: Idea, Materials, Plan, Build, Improve.

 **STUDENTS DO:** Follow along and point as the teacher reads each step.

3. TEACHER SAY: These are the five steps engineers can follow to help find solutions to real-life problems. Mr. Calvin used four of these steps as he developed his solution for the eagle. A short version of the story is printed again under the steps. Let's identify how Mr. Calvin used each step. We will use different colors to underline parts of the story to match each step.

 **READ ALOUD: Underline each step in the story with the color listed below.**

TEACHER SAY: Give a Thumbs Up when you hear a step in the process that we need to underline. I will pause to give everyone a chance to write in their books.

TEACHER DO: Read the modified story at the bottom of the page. Pause when students give a **Thumbs Up** to allow time for underlining. If students are unable to identify a step in the process, stop to prompt students. Remind students to use the color code at the top of the page.

 **STUDENTS DO:** Underline steps in the story based on the color codes given.

Note to Teacher: Use this time as an opportunity to find other examples online of engineers helping animals or humans with external body parts. Examples include engineers designing a wetsuit for a penguin missing its feathers and a tail for a dolphin. For humans, engineers can also design prosthetic limbs.

4. TEACHER SAY: Great job identifying how Mr. Calvin followed steps in the design process. One step we did not hear about in this story is improve. After we create something, we test to see if it works, then we improve it. As we improve it, we start the process over again. This is why the process is in a circle.

TEACHER DO: As you review the steps and show how improvement starts the process over again, point to the steps in a student book.

TEACHER SAY: If you test your design and find a problem, you think of a new IDEA, consider the MATERIALS needed, make a new PLAN, and BUILD your improved design. I wonder, what problems do you think Mr. Calvin might have had while trying to design the beak?

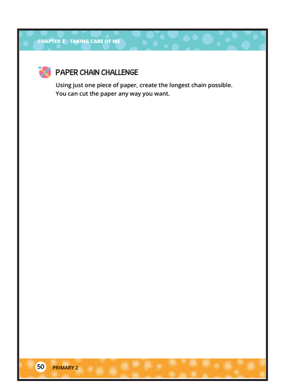


TEACHER DO: Provide **Think Time** for students to consider problems Mr. Calvin might have encountered. You can also choose to use **Calling Sticks** to invite a few students to share their thinking.

TEACHER SAY: Do you think his first beak was designed perfectly? Probably not. What if the beak had fallen off? Or was too soft? Now Mr. Calvin has a new problem he needs to solve, and he can go back through the design process steps. He will need to think of new ideas, look at new materials, make a new plan, and build again. IMPROVE is important because things do not always work the first time or the second time you try. We learn from our mistakes.

Note to Teacher: Stress the importance of making mistakes and improving as a part of the learning process. Students should see the benefit in failure and continually working to improve and learn from mistakes.

5. TEACHER DO: Hand out a piece of construction paper, tape or glue, and scissors to pairs of students.



TEACHER SAY: We will use this process in the Share project we will start tomorrow. Today, let's practice using the steps. You will work with a partner to try to make the longest paper chain possible. Open your book to the page titled Paper Chain Challenge.

TEACHER DO: Model a paper chain, where strips of paper are made into a loop and those loops are put together. You can reference the image at the top of the student page Paper Chain Challenge.



READ ALOUD: Using just one piece of paper, create the longest chain possible. You can cut the paper any way you want.

TEACHER SAY: Look at the design process steps on the page. What is the first step?



STUDENTS DO: Identify IDEA.

TEACHER SAY: Let's begin by Brainstorming ideas with our partner on how we can create the longest paper chain. How will you cut the paper?





STUDENTS DO: Brainstorm ideas with a partner.

TEACHER SAY: Now that we have our ideas, what is the next step in the process?



STUDENTS DO: Identify MATERIALS.

TEACHER SAY: Yes, we need to explore the materials we have. You only have one piece of paper, tape [or glue], and scissors. Our next step is to make a plan. In the box labeled "Plan," you and your partner can draw or write what you want to try first. Make sure you listen to your partner and work together.



STUDENTS DO: Draw or write about a plan with their partner on how to create the longest paper chain.



TEACHER DO: Move around the room and ask students to explain their plan. Prompt students to identify the first thing they want to try. Encourage students to use good collaboration skills, such as listening to each other's ideas and compromising.

TEACHER SAY: Now that you and your partner have a plan and know how you want to start, I will give everyone time to collaborate to make a paper chain.



STUDENTS DO: Collaborate to create paper chains.

TEACHER DO: When pairs are finished, bring the class back together to compare paper chain lengths.

Note to Teacher: Compare chain lengths by lining up the chains next to each other. If there is not space to line up all the chains, you can work in batches, always keeping the longest chain in a batch to compare to the next group. If students have begun to use rulers or other measuring strategies in math, extend this learning experience by measuring the 5 to 10 longest chains and comparing the lengths by number.

6. TEACHER SAY: I like the way I saw partners collaborating and sharing ideas. Let's compare the lengths and see which pair made a long paper chain.

TEACHER DO: Compare the paper chain lengths to find the longest in the class. Then, put student pairs into groups of 4 to 6 to share what worked well and what did not.

TEACHER SAY: We have completed the steps IDEA, MATERIALS, PLAN, and BUILD. Now we can work on IMPROVE. To start, let's share what worked well and what did not work well. This way we can come up with new ideas to help us improve our design. I will hand out Talking

Sticks. Each pair will get a turn to share what worked well for them and what did not work well.



 **STUDENTS DO:** In small groups, share about their paper chain design using **Talking Sticks**.

7. TEACHER SAY: Turn to the next page in your book titled My Improved Plan. With your partner, begin the design process again. What will you do with your partner first?

 **STUDENTS DO:** Answer, share new IDEA.

TEACHER SAY: Start by agreeing on a new idea. Your new idea might be your own or might come from the group sharing we just finished. We can learn from each other.

 **STUDENTS DO:** Share new ideas with partners.

TEACHER SAY: Your MATERIALS will stay the same, and you will get a new piece of paper. The next step is to PLAN.

 **READ ALOUD: Write or draw your ideas for your improved plan.**

 **STUDENTS DO:** Draw new plans.

TEACHER DO: Move around the room as pairs discuss new ideas and draw a new plan. Ask partners to explain the new choices they are making. Prompt students to explain using what they learned from their first design or from another group's first design.

TEACHER SAY: When you are finished planning, you can gather new materials. I will give everyone a new piece of paper to use. Begin building your improved paper chain design when you are ready.

 **STUDENTS DO:** Create a new paper chain.

Note to Teacher: Students may still not find success in making a long paper chain and this is okay. Make sure students understand that the engineering design process can be ongoing. If they are not successful the first one, two, or three times, it does not mean they have not properly engaged and utilized the process. Students should always be able to identify what worked, what did not work, and a next step. This is a measure of their success. Encourage students to not give up and to keep trying new ideas.

TEACHER DO: Great job creating a new design. Compare your new design to your first paper chain. Were you able to create a longer design? If not, what would you try next time? Turn to a new **Shoulder Partner** to share.

 **STUDENTS DO:** Share ideas with a new **Shoulder Partner**.

8. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we practiced using the engineering design process. What were the steps that we followed? See if you can remember all five. Share with your Shoulder Partner.

 **STUDENTS DO:** Identify the steps with a **Shoulder Partner**.

Lesson 8 Overview

LEARNING OUTCOMES

Students will:
- Plan and design a tool or device to collect or clean vegetables.
- Practice applying the engineering design process.

KEY VOCABULARY

- Device
- Tool

MATERIALS

- Student book
- Pencils
- A variety of simple craft materials and recyclables, such as: popsicle sticks, toothpicks, paperclips, pipe cleaners/chenille stems, cardboard, paper, construction paper, cardboard tubes, recycled plastic bottles, sponges, brushes, yarn/string
- Glue, tape
- Scissors
- Markers, crayons
- Eggplant and spinach leaves (optional)

PREPARATION

Have materials ready to distribute to groups or available in a central location of the room for students to self-select. If possible, bring in an actual eggplant and spinach leaves for students to observe. This will allow students to have familiarity with the food they are trying to design for.

LIFE SKILLS

Learn to Live Together

Empathy:
- Demonstrate empathy in communicating with others.

Sharing:
- Effective management and organization of tasks.

Learn to Work

Productivity:
- Setting clear goals.



Learn (90 minutes)

Directions

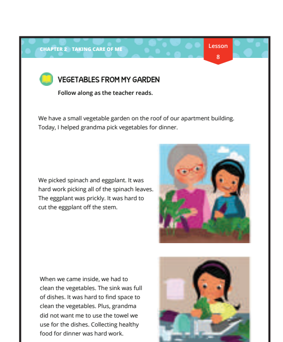
1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Yesterday, we learned how engineers can use a design process to help solve problems. Let's Popcorn to review the steps in the design process.**

TEACHER DO: Call on a student to begin **Popcorn**. Continue until students identify the steps twice in the process in order to show their understanding that the process can be ongoing.



STUDENTS DO: Identify the steps in the design process.



CHAPTER 2 TAKING CARE OF ME

Lesson 8

VEGETABLES FROM MY GARDEN

Follow along as the teacher reads.

We have a small vegetable garden on the roof of our apartment building. Today, I helped grandma pick vegetables for dinner.

We picked spinach and eggplant. It was hard work picking all of the spinach leaves. The eggplant was prickly. It was hard to cut the eggplant off the stem.

When we came inside, we had to clean the vegetables. The sink was full of dishes. It was hard to find space to clean the vegetables. Plus, grandma did not want me to use the towel we use for the dishes. Collecting healthy food for dinner was hard work.

52 PRIMARY 2

2. TEACHER DO: Hand out student books.

TEACHER SAY: **Today you will use the engineering design process to help Nour and her family solve a problem. Open your books to the page titled Vegetables from My Garden.**

TEACHER DO: Read the text in the student book.

Note to Teacher: Depending on your student's reading levels, allow students to attempt to read the passage independently or in small groups.

TEACHER SAY: I am happy to hear that Nour is trying to eat healthy vegetables for dinner. She encountered a few problems in our story, though. Turn to a Shoulder Partner and identify the problems Nour had while getting healthy vegetables for dinner.





STUDENTS DO: Share problems from the story with a **Shoulder Partner**.

TEACHER SAY: Who would like to volunteer to identify a problem?

TEACHER DO: Call on student volunteers. Students should identify: difficulty collecting spinach leaves, prickly spines on the eggplant, difficulty separating eggplant from the stem, cleaning vegetables in a small space, not being able to use a towel to clean.

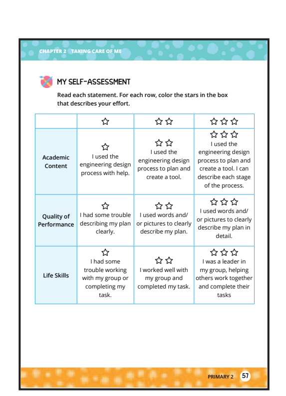
TEACHER SAY: Wow, Nour had several problems trying to gather her healthy vegetables. Our job today is to help her solve one of her problems. She had trouble collecting the vegetables. She also had trouble cleaning the vegetables. We heard that Nour had problems with both vegetables: the spinach leaves and the eggplant.

TEACHER DO: If you were able to bring in an eggplant and spinach leaves, walk them around the room for students to observe. You can also set up the vegetables in a central location or have images to share with the class.

TEACHER SAY: First, we all need to decide which problem we want to solve. Think for a moment about which problem interests you most.

TEACHER DO: Provide **Think Time**. Direct students interested in solving the collecting vegetables problem to stand on one side of the room (with their student books) and those interested in solving the cleaning problem to stand on the other. Once they have repositioned, divide students in the same area into groups of three or four.

3. TEACHER SAY: Now, in your groups you will work to create a tool or device to help Nour solve her problem. We will use the engineering design process. Before we begin, let's review the rubric we will use to assess our projects when we are finished. Knowing the expectations at the beginning helps us plan for how to meet them.



CHAPTER 2 TAKING CARE OF ME

MY SELF-ASSESSMENT

Read each statement. For each row, color the stars in the box that describes your effort.

	☆	☆☆	☆☆☆
Academic Content	☆ I used the engineering design process with help.	☆☆ I used the engineering design process to plan and create a tool.	☆☆☆ I used the engineering design process to plan and create a tool. I can describe each stage of the process.
Quality of Performance	☆ I had some trouble describing my plan clearly.	☆☆ I used words and/or pictures to clearly describe my plan.	☆☆☆ I used words and/or pictures to clearly describe my plan in detail.
Life Skills	☆ I had some trouble working with my group or completing my task.	☆☆ I worked well with my group and completed my task.	☆☆☆ I was a leader in my group, helping others work together and complete their tasks

PRIMARY 2 57

TEACHER DO: Have students turn to the page My Self-Assessment in the student book. Remind students or have one student explain how the rubric is set up. Then, read the squares in the second column (two stars) to explain what the expectations for the project are.

TEACHER SAY: Now that we know our goals, let's begin designing our tools. The first step in the engineering design process is sharing an IDEA. I will give each group a Talking Stick. Pass the talking stick around several times in order to Brainstorm ideas.



STUDENTS DO: Use the **Talking Stick** to share and generate ideas in their groups.

Note to Teacher: Ideas will vary between groups. Allow students to think creatively about possible solutions. Some ideas could include: a brushing utensil for the eggplant, a tray or special brush to clean the smaller leaves of spinach, a container to use to clean the vegetables outside, a way to wash the spinach leaves before picking them (type of water sprayer), a way to gently pick the dirty spinach leaves without getting their hands dirty, a cutting tool for removing the eggplant from the stem, a grabbing tool to avoid the prickly stem of the eggplant.

TEACHER SAY: Great job generating ideas. I would like to hear an idea from each group.

TEACHER DO: Call on each group in the room to share an idea for how to solve Nour's problem.

TEACHER SAY: Thank you for sharing all of your wonderful ideas. The next step in our process is to explore the materials we have available. Sometimes we settle on an idea before figuring out materials. Today, we are going to use the materials step to help us decide which idea to build.

TEACHER DO: Present the materials to the students, either at the front of the room or in groups of materials provisioned for the groups of students. You may choose to identify each material together with the students.

TEACHER SAY: Now that you have seen the materials, use the Talking Stick in your groups to identify the materials you think you need to use to implement one of your ideas. Then, decide which ONE idea you will work on as a group.

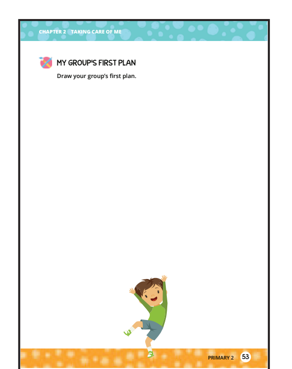
 **STUDENTS DO:** Share ideas for which materials to use. Decide on a common idea to build.

TEACHER SAY: We have completed the first two steps: ideas and materials. Call out the next step.

 **STUDENTS DO:** Call out PLAN.



TEACHER SAY: Now is the time for your groups to generate its first plan. I will hand out a blank sheet of paper, so you can work out your plan. Do not worry about making mistakes. You will each draw a final plan in your student books next. Please make sure you are cooperating with your group and respectfully listening to everyone's ideas. Everyone in the group should agree on your plan.



STUDENTS DO: Collaborate to create a plan to solve their problems.

TEACHER SAY: When you are finished thinking about and discussing your plan, each group member should record it on the page titled My Group's First Plan.

 **STUDENTS DO:** Record the plan in their individual student books.

TEACHER DO: Move around as groups plan and record. Prompt groups to explain which problem they are solving, the materials they plan to use, and how they plan to execute their ideas. Ask students to label their plan to identify the materials being used.

4. TEACHER SAY: Every group now has a plan to solve one of Nour's problems. You will now have time to build your plan. Remember, if something is not working, it is okay to change your idea and try something new. If you need to stop and plan a new design, you can do that too. Engineers often improve on their first design.

TEACHER DO: Provide students with the remainder of the class period to build their tool or device.

Note to Teacher: Avoid telling students that they are doing something incorrectly or that something will not work. Ask guiding questions to prompt students to think about what they are doing, what is working well, what is not working well, and what they could possibly change. There are multiple ways to solve Nour's problems, so encourage creativity.



 **STUDENTS DO:** Collaborate in groups to build their planned tool or device.

TEACHER DO: Have the eggplant and the spinach leaves available for groups to observe or "test" their tool or device on.

5. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: I like the way everyone collaborated to work through the engineering design process to help our friend Nour. Tomorrow you will get a chance to improve your tool or device. Turn to a Shoulder Partner and share one idea you have to improve your design.

 **STUDENTS DO:** Share an idea for improvement with a **Shoulder Partner**.

TEACHER SAY: Tomorrow we will also begin planning a commercial to present our tool or device. You can see a commercial on TV while you are watching a show or the news. When you go home this evening, talk to your parents about commercials you can see on TV.

Note to Teacher: If you know your students do not have access to a TV, be prepared to share video examples of commercials.

Lesson 9 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Improve a tool or device to collect or clean vegetables. • Create a commercial to share and explain the new tools.	• Commercial • Emotions • Expert	• Student book • Pencils • Various art supplies and recycled materials used the previous day for creating tools • Chart paper, if needed by groups • Markers, crayons

PREPARATION

If possible, show students several commercials using different techniques, such as expert/celebrity testimonial, emotional appeal, or free gifts.

Learn to Be

Self-Management:

- Segment goals into specific steps.

Accountability:

- Provide effective feedback.



Share (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

Note to Teacher: If students need additional time to complete their tool or device, you might want to give them 5 to 10 minutes to finish.

TEACHER SAY: **Yesterday, you started making a tool or device to collect or clean a vegetable. An important part of the engineering design process is to improve your design. Let's use a new strategy called Think-Pair-Share to think about ways you might improve your tool or device. Here is how it works: You will think on your own first. Then, find a partner not in your group and share your ideas with each other. Listen carefully to each other. If you have an idea on how your partner can improve, share that idea with them.**



STUDENTS DO: Use **Think-Pair-Share** to share improvements they may make to their device or tool.

TEACHER SAY: **Return to your working groups and share your ideas.**



STUDENTS DO: Share ideas for improvement.

TEACHER SAY: **Respecting other opinions, select one improvement to make to your tool or device. Then, work together to make that improvement.**





STUDENTS DO: Listen to everyone's ideas and select one thing to improve. Then, make the improvement.

TEACHER DO: Have the eggplant and spinach leaves available for students to observe as they make their improvements so that they can continue testing. Circulate around the room as students work.

Listen for and praise ways that students are demonstrating the Life Skills. Use a **Bell** or other prearranged signal to call the students back together after 15 to 20 minutes. Have students place their tool or device in an assigned location so their focus is on the next part of the lesson.

2. TEACHER SAY: **I saw some very good improvements as I walked around the room. Thank you for using your collaboration skills as you worked. I saw good listening and effective management and organization of tasks. Your tools are now ready to share. With the rest of our time today, we will create commercials to advertise the new tools or devices. Think about commercials you have watched on TV. What are some things that a commercial does to make you want to purchase something? Use Think Time.**

 STUDENTS DO: Use **Think Time** to remember commercials.

TEACHER SAY: **Using Calling Sticks, I will select several students to share ideas about how commercials make us want to buy a product.**

 STUDENTS DO: Share ideas about commercials.

TEACHER SAY: **Thank you for sharing. Commercials commonly use one of three ways to make us want to buy a product. One way is the expert or famous person testimonial. For example, if you are selling toothpaste, you might have a dentist in the commercial saying that this is the best toothpaste to use. Is there an expert or famous person who might use your tool or device? Share with a Shoulder Partner.**

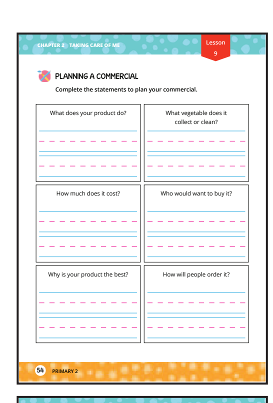
 STUDENTS DO: Share ideas with a **Shoulder Partner**.

TEACHER SAY: **Another way that commercials try to convince us is by connecting to our emotions or feelings. Have you ever seen a commercial that makes you laugh, feel scared, or want to cry? These commercials try to make us feel something. What feelings could you try to use for your tool or device? Share with your Shoulder Partner.**

 STUDENTS DO: Share ideas with a **Shoulder Partner**.

TEACHER SAY: **A third approach commercials use is to offer a discount or free gift. What could you offer free with your tool or device? Share with your Shoulder Partner.**

 STUDENTS DO: Share ideas with a **Shoulder Partner**.


CHAPTER 2 TAKING CARE OF ME
Lesson 9

PLANNING A COMMERCIAL

Complete the statements to plan your commercial.

What does your product do?	What vegetable does it collect or clean?
How much does it cost?	Who would want to buy it?
Why is your product the best?	How will people order it?

54 PRIMARY 2

3. TEACHER SAY: **You have great ideas. Let's start planning. Open your student books to the page Planning A Commercial.**

 READ ALOUD: **Complete the statements to plan your commercial.**

TEACHER SAY: **Let's read the statements together.**

TEACHER DO: Read the text in each box of the graphic organizer in the student book. If you prefer, you can read two to three boxes, have students complete them, read the next few boxes, and so on.


CHAPTER 2 TAKING CARE OF ME

How will you hook your audience? Circle your strategy.

We will use feelings: Happy, Sad, Angry, Scared

We will use an expert: (who?)

We will use free gifts: (what?)

Is there a phone number or website? If so, what is it?	Will you add a tune or jingle to make it memorable? Yes/No

PRIMARY 2 55

 STUDENTS DO: Read along with the teacher.

TEACHER SAY: **In your groups, plan your commercial by answering the questions on the page. Try to write notes in each box to capture your group answers.**

 STUDENTS DO: Answer the questions and complete the statements.

TEACHER DO: Circulate around the room, assisting groups as needed.

TEACHER SAY: **Great job planning your commercial. Now, decide who will say what. You can write a quick script like you did in chapter one when you wrote a play. Remember, commercials are very short. You do not have to write or say a lot.**

 STUDENTS DO: Collaborate to create a script of what to say.

TEACHER SAY: Decide if you need any other props besides your tool. If you do, assign one or two members of your group to work on it. The others can begin practicing. Remember to use your collaboration and peace-making skills from chapter one.



STUDENTS DO: Collaborate to create a commercial.

TEACHER DO: Have chart paper, markers, and crayons available. Circulate around the room to assist students as needed. Prompt students to follow their plan. Encourage students to use collaboration and peace-making skills learned in chapter one. If some groups finish ahead of others, encourage them to listen to each other's commercials and give feedback.

TEACHER SAY: Practice your commercial, memorize what you are going to say, and complete the props you will use. If you finish quickly, find another group that is finished. Listen to each other's commercials, give feedback, and make any improvements.



STUDENTS DO: Practice commercials.

4. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER DO: Use a **Bell** or other prearranged signal to gather students together again.

TEACHER SAY: Today you improved your tool or device and created a commercial to sell your tool or device. What is something your group improved? Turn to a Shoulder Partner to share.



STUDENTS DO: Discuss what they have improved with a **Shoulder Partner**.

Lesson 10 Overview

LEARNING OUTCOMES

Students will:
- Share tool or device for collecting or cleaning vegetables in a commercial.
- Demonstrate good listening skills.
- Communicate using persuasive techniques.

PREPARATION

Have each group organize their tool or device and any other props in a certain area so they are ready to present their commercial.

KEY VOCABULARY

- Performance

LIFE SKILLS

Learn to Be

Communication:
- Good listening.
- Self-expression.

MATERIALS

- Tool or device that was created
- Script, props for commercial if needed



Share (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Yesterday, you improved your tool or device and created a commercial to sell it. Why is it important to have tools or devices that can help us clean our vegetables? I will use Calling Sticks to select a few students to share.**

 STUDENTS DO: Share why we need tools and devices to clean vegetables.

TEACHER DO: Hand out student books.

2. TEACHER SAY: **Turn to the page My Favorite Commercial in your student book. After you have listened to all the commercials, you will choose the one you like best and record some information about it. Let's look over what you will be recording.**

 READ ALOUD: **Complete the statements about your favorite commercial.**

TEACHER DO: Read the statements in the text.

 STUDENTS DO: Read along as teacher reads statements aloud.

3. TEACHER SAY: **Please remember to respect your classmates as they perform. Good listeners do not blurt out or disturb their classmates.**

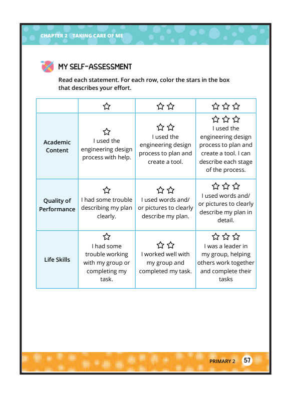
TEACHER DO: Facilitate a process for student groups to perform their commercials. Call groups up one at a time, prompt the audience to clap, and so on.



 STUDENTS DO: Perform commercials.

TEACHER SAY: **Well done. I have enjoyed listening to your commercials. It is time to think about your favorite one and record what you learned on the page My Favorite Commercial in your student book. You may choose your own commercial or one from another group.**

TEACHER DO: Circulate around the room as students respond to the statements, answering clarifying questions if needed.


CHAPTER 2 TAKING CARE OF ME

MY SELF-ASSESSMENT

Read each statement. For each row, color the stars in the box that describes your effort.

	☆	☆☆	☆☆☆
Academic Content	☆ I used the engineering design process with help.	☆☆ I used the engineering design process to plan and create a tool.	☆☆☆ I used the engineering design process to plan and create a tool. I can describe each stage of the process.
Quality of Performance	☆ I had some trouble describing my plan clearly.	☆☆ I used words and/ or pictures to clearly describe my plan.	☆☆☆ I used words and/ or pictures to clearly describe my plan in detail.
Life Skills	☆ I had some trouble working with my group or completing my task.	☆☆ I worked well with my group and completed my task.	☆☆☆ I was a leader in my group, helping others work together and complete their tasks

PRIMARY 2 57

TEACHER SAY: Now that you have recorded your thoughts about your favorite commercial, it is time to assess your own work on this project. Turn to the page My Self-Assessment. I will read through the rubric one row at a time. Fill in the stars above the box that best describes your work.

TEACHER DO: Read through each row of the student rubric, having students first consider the middle column. Then verbally note, "If you did not quite reach that level, the one-star box says…" and, "If you exceeded that level, the three-star box says…"


STUDENTS DO: Complete the student rubric to assess individual work on the project.

4. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Who can describe what we have studied in this chapter? Let me use Calling Sticks to choose a few students to answer.

TEACHER DO: Use **Calling Sticks** to select four students to share what they learned in the chapter. Modify the number of students based on the time you have left in class. Have students thank their groups for working with them.


STUDENTS DO: Summarize what they learned in chapter two.

TEACHER SAY: Thank you for sharing with the class. In the next chapter, we will explore your personal strengths and interests in order to think about jobs you might be interested in when you grow up.

Rubric Assessment (for teacher use)

	Approaching Expectation (1)	**Meeting Expectation (2)**	**Exceeding Expectation (3)**
Academic Content	Identifies choices that people can make to keep themselves healthy with help. *Economics and Applied Science 2.b.*	Identifies choices that people can make to keep themselves healthy. *Economics and Applied Science 2.b.*	Identifies a wide variety of choices that people can make to keep themselves and those around them healthy. *Economics and Applied Science 2.b.*
	Explains how vegetables can be collected safely and/or cleaned properly with help but may not understand the importance of these practices. *Economics and Applied Sciences C.2.a*	Explains how vegetables can be collected safely and/or cleaned properly and why this is important. *Economics and Applied Sciences C.2.a*	Explains several ways that vegetables can be collected safely and cleaned properly and why these are important practices. *Economics and Applied Sciences C.2.a*
	Creates a tool that does not serve its intended purpose. *Visual Art 2.c.*	Creates a model of a tool that could be used for its intended purpose. *Visual Art 2.c.*	Creates an original, effective tool that could be used for its intended purpose. *Visual Art 2.c.*
	Participates minimally in collaborative conversations and may not share ideas. *Speaking and Listening 1.a.*	Participates in collaborative conversations by sharing ideas and responding to the thoughts of others. *Speaking and Listening 1.a*	Participates in collaborative conversations and works to ensure that others are given equal opportunities to share ideas and respond to the thoughts of others. *Speaking and Listening 1.a.*
Quality of Performance	Generates one idea to solve a design challenge. *Science F.1.e.*	Generates two or more ideas to solve a design challenge. *Science F.1.e.*	Generates a wide range of ideas to solve a design challenge in creative ways. *Science F.1.e.*
	Utilizes one of the persuasive techniques shared during class in the commercial but cannot explain its purpose. *Vocational Fields A.4.d.*	Utilizes one of the persuasive techniques shared during class in the commercial and can explain its purpose. *Vocational Fields A.4.d.*	Utilizes and explains persuasive techniques that make for a compelling and influential commercial. *Vocational Fields A.4.d.*
Life Skills	Ignores the feedback of others and may not make improvements to the plan or product.	Makes improvements to the plan or product based on the feedback of others.	Makes effective improvements to the plan or product based on the feedback of others. Asks for feedback without direction from the teacher.
	Offers feedback that is not helpful or does not relate to the plan or product.	Offers feedback to others that helps them improve their plan or product.	Offers insightful feedback to others that helps them improve their plan or product in a meaningful way.

PRIMARY 2

Multidisciplinary

WHO AM I?

Chapter 3: When I Grow Up

Theme Overview

When I Grow Up

COMPONENT	DESCRIPTION	LESSONS
Discover	Students discover strengths and interests and connect them to professions. Students explore how what is learned at school can help in a profession.	3
Learn	Students learn about jobs in the local community and the tools used. Students research a job connected to their personal interests and strengths.	5
Share	Students create a poster about a desired job and present to classmates at a mock job fair.	2

Connection to Issues



Citizenship: We belong. We are part of our communities, country, and the human family. We all have rights and we all have responsibilities.

Life Skills Addressed



DIMENSION	DESCRIPTION
Learn to Know	**Critical Thinking:** • Define relationships between different objects. • Differentiate between reality and imagination. **Creativity:** • Organize parts to form a new or unique whole.
Learn to Work	**Collaboration:** • Respect for other opinions.
Learn to Live Together	**Respect for Diversity:** • Solicit and respect multiple and diverse perspectives to broaden and deepen understanding. **Empathy:** • Demonstrate empathy in communicating with others. **Sharing:** • Effective management and organization of tasks.
Learn to Be	**Accountability:** • Provide effective feedback. **Communication:** • Good listening. • Self-expression. • Reading, writing, nonverbal communication skills.

Learning Indicators

Throughout this chapter, students will work toward the following learning indicators:

READING:

F. Reading Comprehension: Informational Text

1.b. Ask and answer questions (who, what, where, when, why, and how) about key details in a text.
5.a. Use text features (such as headings, subheadings, text color, table of contents) to locate information within a text.
5.b. Distinguish how specific images (such as diagrams or graphs) provide information.
8.a. Read and comprehend informational text at appropriate difficulty level for Primary 2.

WRITING:

C. Informational and Opinion

1.a. Write short, explanatory texts introducing a topic and using facts to develop details.

D. Process, Production, and Research

1.a. Use graphic organizers to plan writing.

SPEAKING AND LISTENING:

A. Foundational Skills

1.a. Participate in collaborative conversations with peers and adults about various topics and texts.
1.b. Follow agreed-upon rules for discussions.
2.b. Recount key ideas or details from a text read aloud or information conveyed orally.
4.a. Use intonation, facial expressions, and body language to express feelings and thoughts appropriate to the situation.

MATH:

B. Operations and Algebraic Thinking

1.c. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.
1.d. Solve addition and subtraction problems within 100 with one unknown in any position within the equation.

C. Number and Operations in Base Ten

1.k. Order a set of up to 5 numbers with values up to 1,000 from least to greatest or greatest to least.
2.a. Apply a variety of problem-solving strategies based on concrete **model**s or drawings, place value concepts, properties of operations, and/or the relationship between addition and subtraction and relate the strategy to a written method.

SOCIAL STUDIES:

D. Human Systems

2.a. Identify the main economic activities in different Egyptian regions.
2.c. Identify examples of specialized workers who provide services in the community.

D. Human Systems

1.c. Explain why people must make choices based on wants and needs.

VISUAL ART:

A. Producing Visual Art

1.a. Identify secondary colors and the primary colors that combine to create them.
2.a. Use various drawing and coloring tools to create art.
2.f. Collaborate to produce art with peers.

B. Presenting Visual Art

1.a. Present or display artwork produced by the students and discuss the work with peers.
1.b. Analyze how art exhibits contribute to communities.
1.c. Participate in producing and displaying a work of art (individually or collectively) relating to current events in home, school, or community life.

ECONOMICS AND APPLIED SCIENCES:

D. Managing Individual and Family Resources and Rationing Consumption

1.a. Identify sources of family income.
1.b. Describe the role of family members in the acquisition or use of resources (such as food, housing, and transportation).

VOCATIONAL FIELDS:

A. Career Social Skills and Preparation

1.d. Predict conversations that could occur in various job situations.
1.e. Describe how various professionals interact with others at work (customers or colleagues).
2.a. Identify current personal interests and strengths.
2.b. Identify how interests relate to various professions.
2.c. Explain how what is learned at school can help in a profession.
4.a. Describe various occupations and explain the importance of various professions in the community (such as industrial, agricultural, commercial, hotel, and tourism).
4.b. Identify and describe the function of tools in various professions.

INFORMATION AND COMMUNICATION TECHNOLOGIES:

C. Technological Production Tools

1.a. Use digital technologies (such as a computer) appropriately to support learning.
1.c. With support, use digital sources to search for and collect content to answer a specific question.

COMPUTATIONAL THINKING:

Learn to Know: Critical Thinking

- Define relationships between different objects.

Sciences:

A.1.c. Use observations to describe patterns.

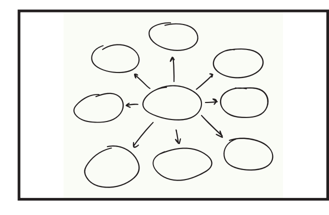
CH 3

Pacing Guide

LESSON	INSTRUCTIONAL FOCUS
1	**DISCOVER: Students will:** • Identify and sort various jobs. • Complete a personal interest survey.
2	**DISCOVER: Students will:** • Connect personal interests and strengths to professions. • Identify tasks involved in various jobs.
3	**DISCOVER: Students will:** • Discover math, reading, and writing in job scenarios. • Describe how science and social studies knowledge can help in job scenarios.
4	**LEARN: Students will:** • Use online resources to research jobs in the local community. • Write to explain a job in the local community. • Describe jobs held by members of their families. • Describe tools used in a variety of jobs.
5	**LEARN: Students will:** • Explain the importance of a profession to the local community. • Interview a local worker about his or her job. • Define income and its importance to the family. • Identify ways a family can earn income.
6	**LEARN: Students will:** • Explain the importance of income in obtaining family resources (food, housing, clothing, transportation). • Describe family members' roles in obtaining resources. • Solve addition and subtraction story problems related to income.
7	**LEARN: Students will:** • **Model** appropriate on-the-job interactions. • Predict conversations in different job-related scenarios.
8	**LEARN: Students will:** • Design a job connected to personal interests and strengths. • Ask and answer questions about a specific job.
9	**SHARE: Students will:** • Create a poster to share information about a desired job.
10	**SHARE: Students will:** • Present posters to classmates. • Ask and answer questions with peers about various jobs.

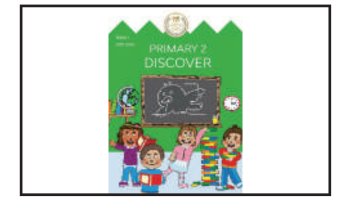
Materials Used

Job web posters

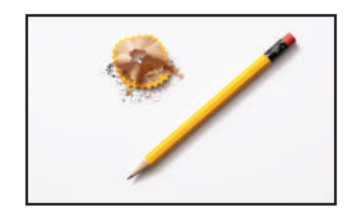


Student book





Pencils



Crayons



Subject words

Books about careers

Computers



Chart paper titled "jobs in our community"

Red paper



Notecard



Tape

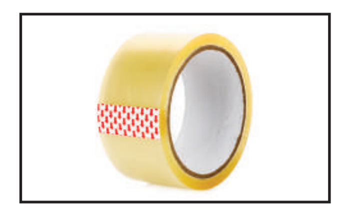
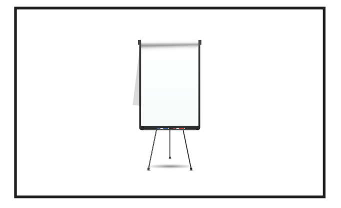


Chart paper "job categories"

Chart paper



Fliers for actual jobs

Student-created posters

Lesson 1 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Identify and sort various jobs. • Complete a personal interest survey.	• Agricultural • Categorize • Commercial • Industrial • Profession • Tourism	• Job web posters • Student book • Pencils • Crayons

PREPARATION

Prepare several job web posters for each group of five to six students. In the center of the page, write the word "Jobs" and then have several lines coming off the middle circle for students to write jobs they know.

LIFE SKILLS

Learn to Know	Learn to Be
Critical Thinking: • Define relationships between different objects.	Communication: • Reading, writing, nonverbal communication skills.



Discover (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen. Encourage students to lead this routine as they become more comfortable.

This is a time to excite your students about the chapter. Tell them they are beginning a chapter of study called, "When I Grow Up."

TEACHER SAY: We are starting a chapter called "When I Grow Up." What do you think we might learn?

TEACHER DO: Use **Calling Sticks** to choose three students to answer the question before continuing.

 **STUDENTS DO:** Predict what they will learn.

TEACHER SAY: In our first chapter, we explored the jobs we hold in our family life. We learned how to solve problems that we encounter in our lives. In the second chapter, we learned about choices we can make to keep ourselves healthy as we grow and change. Turn to a Shoulder Partner and tell them one thing you have learned about so far that helps you answer the question, "Who am I?"

 **STUDENTS DO:** Share ideas with a **Shoulder Partner**.

TEACHER SAY: In this chapter, we will learn about what interests us and how that might connect to a profession in our community. A profession is a line of work that requires special skills and training. Adults choose a profession, then they look for a job in that field. At the end of this chapter, you will be creating a job poster to share at a mock job fair we will host. Your poster will provide information about a job you want to have when you grow up based on each of your unique interests and strengths.

2. TEACHER DO: Put students into groups of four to six, depending on your class size and the

number of groups you want to have. In each group, hand out a crayon or marker. Give each group a job web poster page. If poster-sized paper is not available, students can make a smaller version on regular-sized paper.

Note to Teacher: In Primary 1, students learned about industrial vs. non-industrial jobs. Students identified where people can work and tools they use. The following activity can be used as a preassessment of what students are able to recall from previous learning.

TEACHER SAY: Let's share what we already know about jobs in our community. In your groups, we will use a new strategy called Pass the Pen. One student in the group will write down a job he or she knows. Then the marker will be passed to the next student in the group. You will continue to Pass the Pen until I ask you to stop. If it is your turn and you cannot think of a job to add, you can pass the pen and continue thinking until it is your turn again. The goal is to Brainstorm as many jobs as you can as a group. Who can explain how we will use Pass the Pen?

 **STUDENT DO:** Explain how to use the strategy **Pass the Pen**.

TEACHER SAY: Great. Before we begin, I want to give everyone Think Time to think of jobs they already know. Maybe you are thinking about jobs people in your family have or jobs you have seen in your community or on television.

TEACHER DO: Provide **Think Time**.

TEACHER SAY: We are ready to begin. Can the person holding the marker for your group hold it above your head? When I say to begin, you may write a job and then pass the marker to the person next to you. Continue taking turns until I say to stop. You may begin.

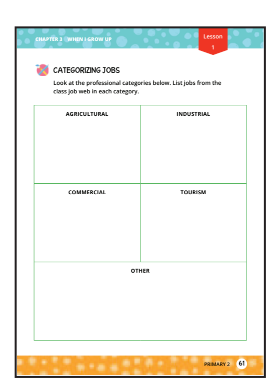
TEACHER DO: Move around the room as students work. Make note of jobs that multiple groups list. Provide enough time for the all students to participate at least two times.

 **STUDENTS DO:** Use **Pass the Pen** to **Brainstorm** jobs.

3. TEACHER DO: While students finish brainstorming, hang a large job web poster at the front of the room.

TEACHER SAY: Thank you for taking turns as you listed jobs. I can tell we already know a lot as we begin this chapter. Let's share with the whole class. I will call on each group to share one job on the poster. When it is your group's turn, remember to share a job we have not yet listed.

TEACHER DO: Move around the room, calling on each group to name a job from their group's poster. Record each new job on the class poster. Continue until no group is able to add a new job or you do not have any more space on the poster. You can choose to combine jobs if they are similar or you may make connections between jobs (or ask students to make connections).


CHAPTER 3 WHEN I GROW UP
Lesson 1

CATEGORIZING JOBS

Look at the professional categories below. List jobs from the class job web in each category.

AGRICULTURAL	INDUSTRIAL
COMMERCIAL	TOURISM
OTHER	

PRIMARY 2 61

STUDENTS DO: Share jobs from the group posters.

4. TEACHER SAY: We have created a large list of jobs we are already familiar with. As I look at this list, I am noticing that some of these jobs are similar. We can categorize, or group, the jobs on our list. Remember that a profession is a line of work that requires special skills and training. We use the word "profession" to help us categorize types of jobs. For example, the medical profession helps us categorize different types of doctors and nurses.

TEACHER DO: Point out an example of two similar jobs on the list and explain what they have in common, such as, "a butcher and a grocer both sell food," or, "a construction worker and a mechanic both fix/make things." Hand out student books.

TEACHER SAY: Open your books to the page Categorizing Jobs. Follow along as I read the profession categories listed on the chart.



TEACHER DO: Read aloud the five job categories on the page, reminding students of the meaning and providing examples for each: agricultural, industrial, commercial, tourism, other.

TEACHER SAY: One category is other. This category is for a job that you do not think fits into

the first four categories. Turn to a Shoulder Partner to discuss some of the jobs on the job web and which category you will list them in. For example, I see farmer on our job web. This job fits into the agricultural category.

 STUDENTS DO: Share category ideas with a **Shoulder Partner**.

TEACHER SAY: **Now it is your turn. Look at all of the jobs we have on our job web poster. Work alone or with your partner to categorize the jobs in each category.**

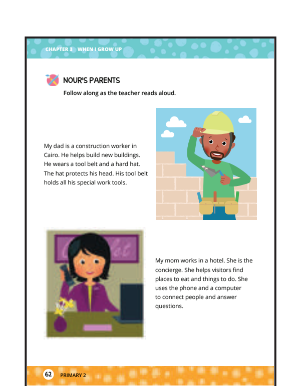


 STUDENTS DO: Write jobs from the class web into each category .

TEACHER DO: As students work, circulate around the room to offer support. Ask students to explain their categorizing choices. Make note of misunderstandings students may have about different jobs. If many students struggle to understand jobs or categories, provide more support, such as giving a brief description of each job to the class, then providing time for the students to choose the appropriate category.

TEACHER SAY: **Thank you for working to categorize the different jobs we know. I will use Calling Sticks so we can share how we categorized.**

TEACHER DO: As students share how they categorized, circle each job type in a different color on the web. For example, you can circle all the industrial jobs in blue. This will allow students to visually see the categories as a whole class.


CHAPTER 3: WHEN I GROW UP

NOUR'S PARENTS

Follow along as the teacher reads aloud.

My dad is a construction worker in Cairo. He helps build new buildings. He wears a tool belt and a hard hat. The hat protects his head. His tool belt holds all his special work tools.

My mom works in a hotel. She is the concierge. She helps visitors find places to eat and things to do. She uses the phone and a computer to connect people and answer questions.

62 PRIMARY 2

5. TEACHER SAY: **I wonder what types of jobs our friend Nour's parents and family members have. Open your student book to the page Nour's Parents. As I read, think about which category her parents' jobs would fit into.**

TEACHER DO: Read the passage in the student book.

TEACHER SAY: **Thank you for following along as I read. What jobs did Nour's mom and dad have. Turn to a Shoulder Partner to describe the jobs you heard and which category the jobs would fit into.**

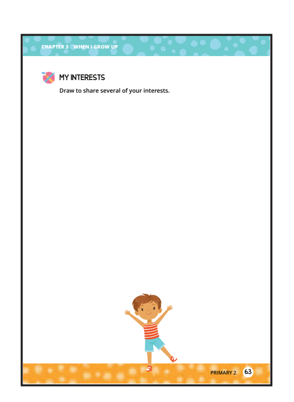
 STUDENTS DO: With a partner, share Nour's parent's jobs.

TEACHER SAY: **Nour's dad is a construction worker. This is in the industrial category, or profession. Nour's mom is a concierge, which is a job in tourism. These two jobs are very different. I wonder which profession would be the most interesting to you. If you think you would be more interested in the industrial profession, stand up. If you think you would be more interested in the tourism profession, stay in your seat.**

 STUDENTS DO: Stand or sit to share opinions.

TEACHER SAY: **If you are standing, move next to someone who is still sitting. Discuss why you are more interested in one type of profession.**

 STUDENTS DO: Discuss preferences.


CHAPTER 3: WHEN I GROW UP

MY INTERESTS

Draw to share several of your interests.

PRIMARY 2 63

6. TEACHER SAY: **Thank your partner for sharing with you. Everyone is allowed to have a different preference for work he or she enjoys. Remember from our last chapter, this is called an opinion. Our opinion is based on our personal interests and things we find enjoyable. I want to learn a little more about each of you and your personal interests. Open your book to the page My Interests.**

TEACHER DO: Make sure students have crayons or colored pencils for drawing.

 READ ALOUD: **Draw to share several of your interests.**

TEACHER SAY: **If I were drawing on this page, I might choose to draw animals and people playing soccer because I love taking care of my pets and playing soccer with my family.**

Note to Teacher: You can choose to state your own personal interests.

TEACHER SAY: Turn and share with a Shoulder Partner what you might draw on this page to communicate your interests.



STUDENTS DO: Share interests with a **Shoulder Partner**.

TEACHER SAY: Thank you for sharing. Now, take time to quietly draw in your books.

TEACHER DO: Move around the room and ask students individually to explain what they are drawing. When students are finished, if time allows, use **Shake It Share It High Five** to have students share interests with multiple partners. You can also choose to use **Gallery Walk**, and have students leave their books open at the tables and walk around the room to observe what others have drawn.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we were able to think about familiar jobs and categorize them. Turn and Talk to a Shoulder Partner about the job categories, or professions, we discovered today.



STUDENTS DO: Share categories with a **Shoulder Partner**.

TEACHER SAY: Tomorrow we will take a personal interest survey and consider what types of professions might best match our interests.

Lesson 2 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Connect personal interests and strengths to professions. • Identify tasks involved in various jobs.	• Interests • Profession • STEM • Survey • Tasks • Tools	• Student book • Pencils

LIFE SKILLS
Learn to Know
Critical Thinking: • Define relationships between different objects.



Discover (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen.

TEACHER SAY: Yesterday, we discovered categories for different jobs. We also began exploring our own personal interests. Turn to a Shoulder Partner and share a new job you heard about yesterday.



STUDENTS DO: Share a job with a **Shoulder Partner**.

TEACHER SAY: Let's Popcorn to share jobs we discussed yesterday.

TEACHER DO: Call on a student to begin **Popcorn**. Allow five to six students to share.

2. TEACHER DO: Hand out student books and pencils.

TEACHER SAY: Yesterday we also heard about the jobs that Nour's parents have and we discussed which profession we would prefer. We had different preferences. How do you think adults choose their jobs?

TEACHER DO: Provide **Think Time**, then use **Calling Sticks** to have students share ideas.

TEACHER SAY: Adults can choose jobs based on many things. Some choose what interests them most. Some choose what they are good at doing. Understanding our interests will help us as we get older and begin to think about jobs we want to do. Open your books to the next page, Personal Interest Survey. Let's think a little more about ourselves.



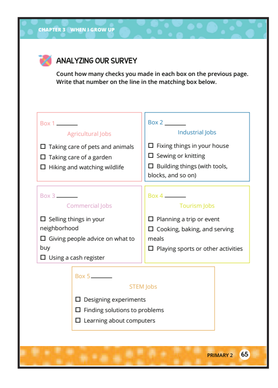
READ ALOUD: Put a checkmark next to each activity that you enjoy.

TEACHER DO: Read each statement and give students time to respond in their student book.



STUDENTS DO: Complete the survey.

3. TEACHER SAY: Thank you for taking time to consider the experiences that you enjoy. This survey will help you see if you prefer a certain profession. Yesterday we identified different


CHAPTER 3 WHEN I GROW UP

ANALYZING OUR SURVEY

Count how many checks you made in each box on the previous page. Write that number on the line in the matching box below.

Box 1 ______
Agricultural Jobs
- ☐ Taking care of pets and animals
- ☐ Taking care of a garden
- ☐ Hiking and watching wildlife

Box 2 ______
Industrial Jobs
- ☐ Fixing things in your house
- ☐ Sewing or knitting
- ☐ Building things (with tools, blocks, and so on)

Box 3 ______
Commercial Jobs
- ☐ Selling things in your neighborhood
- ☐ Giving people advice on what to buy
- ☐ Using a cash register

Box 4 ______
Tourism Jobs
- ☐ Planning a trip or event
- ☐ Cooking, baking, and serving meals
- ☐ Playing sports or other activities

Box 5 ______
STEM Jobs
- ☐ Designing experiments
- ☐ Finding solutions to problems
- ☐ Learning about computers

PRIMARY 2 65

professions: agricultural, industrial, commercial, tourism, and other. Each box on the survey matches a profession. Today, the "other" profession has been replaced with a new one: STEM. We will define STEM in a moment. For now, turn the page in your student book to Analyzing Our Survey.



READ ALOUD: **Count how many checks you made in each box on the previous page. Write that number on the line in the matching box below.**



STUDENTS DO: Count their checks and record the number in the appropriate box.

TEACHER SAY: **Each box represents one of our professions. Circle any box that had three checkmarks. If you did not have any with three checkmarks, circle the boxes that have two checkmarks.**



STUDENTS DO: Identify the boxes that have the most checkmarks.

TEACHER DO: Explain how to read the results. For example, if a student has the most checkmarks in box 1, then his interests match the agricultural profession. If another student has the most checkmarks in box 2, then her interests match the industrial profession, and so on.

TEACHER SAY: **If you have the most checkmarks in box 5, then your interests match jobs in the STEM field. STEM stands for Science, Technology, Engineering, and Math. STEM jobs can include engineers, scientists, biologists, and computer programmers. Turn to a Shoulder Partner to share the job type your interests match to.**



STUDENTS DO: Turn to a **Shoulder Partner** to share the results of the survey.

TEACHER SAY: **Now let's share together. I will use Calling Sticks to hear about what profession your interests match to.**

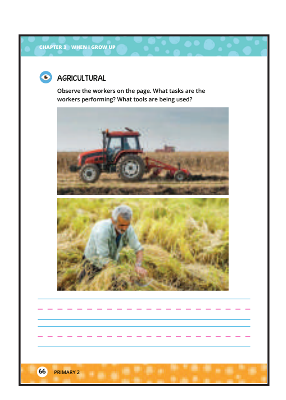
TEACHER DO: Use **Calling Sticks** to allow at least 10 to 15 students to share.



Note to Teacher: You can extend the analysis of data in the surveys to include computational thinking by asking students to suggest a method for collecting class-level data. Prompt students to observe patterns in the data and verbally describe the relationships between different data points.

TEACHER SAY: **Throughout this chapter, we will continue to learn about different jobs, the importance of those jobs to our families, and how our personal interests can help us pick a job we would like to have when we grow up. We will revisit this survey later in the chapter.**

TEACHER DO: Hold up a student book and show the five worker pages as you explain the next learning experience.


CHAPTER 3 WHEN I GROW UP

AGRICULTURAL

Observe the workers on the page. What tasks are the workers performing? What tools are being used?

66 PRIMARY 2

4. TEACHER SAY: **Let's explore more about each category, or profession. Every job has its own responsibilities and tools. Let's analyze images of people doing a job in each of these categories. The next five pages of your student book feature pictures of five different jobs. The pages are named for the professions: Agricultural, Industrial, Commercial, Tourism, STEM. Turn to the category you had the most interest in based on your survey. For example, if you had the most checkmarks in "Agricultural," turn to that page.**



STUDENTS DO: Find the page that matches their highest interest category.



READ ALOUD: **Observe the workers on the page. What tasks are the workers performing? What tools are being used?**

TEACHER SAY: **Take a moment on your own to observe the images and think of the answers to those questions.**

TEACHER DO: Provide **Think Time** for students to observe the image.

TEACHER SAY: **Now, share what you observed with others who studied the same pictures. Make sure you are answering the two questions in the book: What tasks are the workers performing? What tools are being used? A tool can be as simple as a pencil. A tool is something the**

worker uses to complete his or her job.

TEACHER DO: Move students into groups based on which image they observed. You can choose to have five large groups to discuss or you can put students into smaller groups of three to four within each larger group.


Critical Thinking

 **STUDENTS DO:** Analyze the image in a group, focusing discussions on the two questions.

5. TEACHER SAY: Now that you have had time to analyze the images together, let's share what we discovered. I will call on a student from each group to share an answer to one of the questions.

TEACHER DO: Call on a student from each profession group to share what they observed. Make sure students are focusing their answers on what the person is doing and the tools he or she is using. Make connections between jobs if tools are similar. Use questions/statements such as: I noticed that the hotel receptionist, cashier, and computer programmer all use a computer. Which jobs did you notice involve talking with people?

 **STUDENTS DO:** Share observations from student book images.

TEACHER SAY: We are going to record what we discovered in our books so we can remember tools and tasks. On the lines below, write a sentence to tell what the worker is doing and what he or she is using.

Note to Teacher: You can choose to have groups write a sentence together or ask students write a sentence individually. If necessary, you may want to **model** *a sentence you could write for one of the jobs. An example: The cashier puts the food into the bags for the customer. The computer programmer uses a keyboard and monitor. If time allows, have students from each profession group share a sentence so that the whole class can record one sentence on each page, or have students share sentences with a* **Shoulder Partner**.

 **STUDENTS DO:** Write a sentence to explain the job being performed and tools being used.

6. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we discovered professions that matched our interests. We also analyzed images of workers performing different jobs to determine tasks and tools. Tomorrow we will discover how what we learn in school can help us perform jobs that interest us in the future.

Lesson 3 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Discover math, reading, and writing in job scenarios. • Describe how science and social studies knowledge can help in job scenarios.	• Topics	• Student book • Pencils • Subject words

PREPARATION

Write the words Science, Social Studies, Technology, Arts, Math, Reading, and Writing on large pieces of paper to post around the room.

LIFE SKILLS

Learn to Work	Learn to Be
Collaboration: • Respect for other opinions.	Communication: • Good listening. • Self-expression. • Reading, writing, nonverbal communication skills.



Discover (90 minutes)

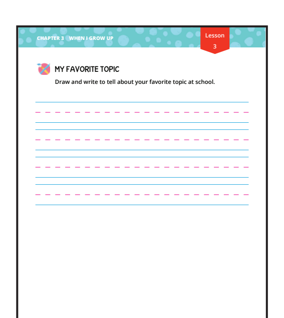
Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Yesterday, we discovered tasks and tools associated with different jobs and professions. I will use Calling Sticks to have students share what they remember from the job they observed yesterday.**

TEACHER DO: Call on three to four students to describe the jobs observed.

TEACHER SAY: **Great job remembering. Today, let's think about what we are learning in school. School is helping to prepare you for when you grow up. I wonder how it will help you in your future jobs.**



2. TEACHER DO: Hand out student books.

TEACHER SAY: **Open your book to the page titled My Favorite Topic. Every week we learn reading, writing, math, social studies, science, technology, and the arts. Think about which topic is your favorite. What part of the day do you look forward to most?**

TEACHER DO: Provide students with Think Time.

 READ ALOUD: **Draw and write to tell about your favorite topic at school.**

 STUDENTS DO: Draw and write about their favorite topic.

TEACHER DO: Observe what students are writing. If time allows, prompt students to explain why they like this topic. After some work time, put students into groups of five or six.

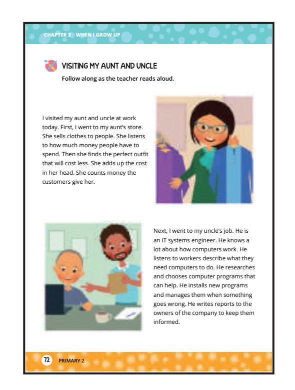
TEACHER SAY: **Thank you for writing about your favorite topic. In your groups you will use a Talking Stick to explain to your friends why this is your favorite topic. Remember, you are stating an opinion. Everyone is allowed to have a different opinion. You should be respectful of everyone's opinion even if it is different from your own.**

STUDENTS DO: Share favorite topics with group members by passing a **Talking Stick**.



3. TEACHER SAY: Each of these topics will become very important to your future job choice. Let's think. How do you think a farmer might use knowledge about science?


STUDENTS DO: Share ideas.


CHAPTER 3 WHEN I GROW UP

VISITING MY AUNT AND UNCLE

Follow along as the teacher reads aloud.

I visited my aunt and uncle at work today. First, I went to my aunt's store. She sells clothes to people. She listens to how much money people have to spend. Then she finds the perfect outfit that will cost less. She adds up the cost in her head. She counts money the customers give her.

Next, I went to my uncle's job. He is an IT systems engineer. He knows a lot about how computers work. He listens to workers describe what they need computers to do. He researches and chooses computer programs that can help. He installs new programs and manages them when something goes wrong. He writes reports to the owners of the company to keep them informed.

72 PRIMARY 2

TEACHER SAY: Yes, a farmer needs to understand how plants grow and how animals thrive, which we learn in science. Let's learn about more connections. Turn to the page titled Visiting My Aunt and Uncle. We will hear from Nour as she visits her family at their jobs. Listen for what topics her aunt and uncle use while they are working.

TEACHER DO: Read the text in the student book.

TEACHER SAY: As I read, I heard examples of math, science, writing, and reading. Turn to a Shoulder Partner and share the topics you heard Nour's aunt and uncle using as they worked.

TEACHER DO: Listen as students discuss. They should identify math in the job as a sales associate, and they should identify reading, science, and math for the uncle's job.


STUDENTS DO: Share examples of topics with a **Shoulder Partner**.

CHAPTER 3 WHEN I GROW UP

I WORK IN A HOTEL

Underline examples of school topics where Nour's mom works. Use the color guide below.

Math | Reading | Writing | Social Studies

Hello, I am Nour's mother.
I work in a hotel in the city.
I am a concierge. A concierge helps guests.
I give suggestions for restaurants.
I share information about places to visit in the city.

Sometimes I help guests before they arrive.
I send emails to future guests to give them ideas for their trip.
I can even plan a daily schedule for a guest.
I love helping visitors enjoy the city.

PRIMARY 2 73

4. TEACHER SAY: Let's go back and discover more about what Nour's mom does. Turn to the next page in your book titled I Work in a Hotel. Nour's mom is going to share with us about her work as a hotel concierge.

TEACHER DO: Read the text in the student book.


READ ALOUD: Underline examples of school topics where Nour's mom works. Use the color guide below.


STUDENTS DO: Underline examples of topics in the various colors.

Note to Teacher: This activity can be structured in a variety of ways. Students can work independently to reread and underline. You can put students into small groups to reread the text and underline topic areas. You can also choose to have the class work as a whole group as you reread the text, pausing so that students can underline examples.

TEACHER DO: When students have completed underlining, lead a discussion as a class to share examples of school topics being used in a job.

TEACHER SAY: We are all discovering how important learning in school can be when we grow up and begin to work. Turn back to a job picture that we observed yesterday.


STUDENTS DO: Turn back to one of the job images.

TEACHER SAY: I wonder how these workers use math, reading, writing, science, social studies, technology, and the arts. Think about how the job might use something you are learning in school.

TEACHER DO: Provide **Think Time** for students to consider connections between school topics and jobs. Hang posters that name each topic around the room.

TEACHER SAY: Let's share our ideas. Around the room, I have posted each topic area. Take the image you are studying to one of the topic areas. Take turns discussing how you think that topic is used in the job. For example, if I was looking at the computer programmer, I could move to "Writing" and share how the programmer needs to be able to write out his or her plans. Who can explain what we are doing now?


STUDENTS DO: Summarize the instructions.

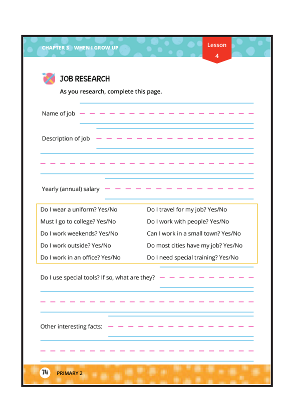
TEACHER SAY: Great. Everyone, stand up and move to a topic area with your book.



TEACHER DO: Allow time for students to share at a topic area. As they share ideas, move around to prompt and guide discussions as needed. Have students switch to at least one more topic area and discuss.

5. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we discovered that what we are learning today in school will help us as we grow up and work as adults. Tomorrow we will research jobs in our community. Tonight, when you go home, ask your parents and family members what type of job they have. Which profession describes their jobs: agricultural, industrial, commercial, tourism, or STEM? Or maybe it is something else? Be ready to share with the class tomorrow.


CHAPTER 3 WHEN I GROW UP

Lesson 4

JOB RESEARCH

As you research, complete this page.

Name of job

Description of job

Yearly (annual) salary

Do I wear a uniform? Yes/No
Do I travel for my job? Yes/No
Must I go to college? Yes/No
Do I work with people? Yes/No
Do I work weekends? Yes/No
Can I work in a small town? Yes/No
Do I work outside? Yes/No
Do most cities have my job? Yes/No
Do I work in an office? Yes/No
Do I need special training? Yes/No

Do I use special tools? If so, what are they?

Other interesting facts:

74 PRIMARY 2

Note to Teacher: Tomorrow students will be asked to research in class. If you do not have access to computers or a library for researching, assign students the questions on the student book page Job Research to complete at home with a family member's help.

Lesson 4 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Use online resources to research jobs in the local community. • Write to explain a job in the local community. • Describe jobs held by members of their families. • Describe tools used in a variety of jobs.	• Profession • Salary	• Books about careers • Pencils • Computers with internet access • Chart paper titled, "Jobs in Our Community" • ½ sheet of red paper per student • ¼ piece of paper per student (or one notecard per student) • Tape • Chart paper titled, "Job Categories" • Student book

LIFE SKILLS

Learn to Be

Communication:

- Reading, writing, non-verbal communication skills.

PREPARATION

Schedule time in the library or computer lab if available. Collaborate with a school or local librarian to select books on various jobs in advance. Research links for students to use on the computer. Compile the links on a document that students can click on in the computer lab. Prepare a list of jobs and possible tools students might use for the **Relay Race**.

Note to Teacher: There are several ways to implement this lesson. If computers are available, provide students a list of recommended links to guide their research. To monitor and assist student computer use, provide red paper tents students can hang on their computers when they need assistance.

If computers are not available, you could plan a class visit to the school or local library or collect books and other resources on various jobs familiar to your community. Another alternative is to assign the research portion of this lesson at the end of Lesson 3. Links can be shared via social media and students can work with a family member to complete the questions in the student book.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: Yesterday, we discovered how what is learned at school can help in a job. Today, we will research jobs in the local community. Share with a Shoulder Partner one topic you learn in school that will help in a job.

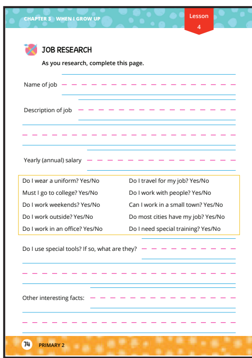
 **STUDENTS DO:** Share ideas with a **Shoulder Partner**.

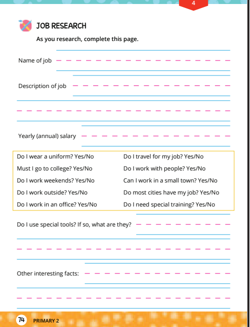
TEACHER DO: Use **Calling Sticks** to have a few students share a connection between a topic and job.

Note to Teacher: Use this brief discussion to preassess students' understanding of jobs. In Primary 1, students learned about community helpers such as firefighters, teachers, police, doctors, construction workers, electricians, and steel workers.

2. TEACHER SAY: To begin our research, let's name some jobs we know.

TEACHER DO: Use **Calling Sticks** to select students to share. Write names of jobs on chart paper labeled, "Jobs in Our Community."





CHAPTER 3 WHEN I GROW UP

Lesson 4

JOB RESEARCH

As you research, complete this page.

Name of job

Description of job

Yearly (annual) salary

Do I wear a uniform? Yes/No	Do I travel for my job? Yes/No
Must I go to college? Yes/No	Do I work with people? Yes/No
Do I work weekends? Yes/No	Can I work in a small town? Yes/No
Do I work outside? Yes/No	Do most cities have my job? Yes/No
Do I work in an office? Yes/No	Do I need special training? Yes/No

Do I use special tools? If so, what are they?

Other interesting facts:

74 PRIMARY 2





STUDENTS DO: Name a variety of jobs in the community.

TEACHER DO: Depending on the number of jobs available in your community, assign students a job or allow students to choose. Hand out student books. Hold up the page, Job Research.

TEACHER SAY: Let's find out more about these jobs in our community.



READ ALOUD: As you research, complete this page.

TEACHER DO: Read each statement, discuss, and answer student questions before students start to research.



STUDENTS DO: Research jobs and complete page.

Note to Teachers: An easy way to identify students who need assistance is to give each student a piece of red paper. Students can fold the paper like a tent and place it on top of the computer or table to indicate that they need assistance.

TEACHER DO: Circulate around the room, assisting students as needed. Hand out ¼ piece of paper with a piece of tape on one edge to each student. You may also use a notecard or similar small piece of paper with tape attached. Use an established signal, such as a **Bell**, to regain students' attention.

Note to Teacher: If students completed the research with a family member at home, you will begin your instruction here.

3. TEACHER SAY: Let's learn more about these community jobs by sharing what we have learned. Please follow my directions:
1) Write the name of the job you researched on the paper I provided.
2) Have your Shoulder Partner help you tape the paper on your back.
3) When I say to begin, walk around the room with your student book to find a partner.
4) Read the paper on the back of your partner and ask him or her three of the questions you researched.



TEACHER DO: As you read the statements above, pause and allow students to complete each step before reading the next instruction. Allow students freedom to move about the classroom and ask about community jobs . After approximately 10 minutes, use an established signal, such as a **Bell**, to regain students' attention.

TEACHER SAY: I will use our Calling Sticks to select a student. When I call your name, tell us one thing you were surprised to learn about a community job.



STUDENTS DO: Share ideas.

TEACHER DO: Hang the chart paper with the title, "Job Categories" where all students can see it.

4. TEACHER SAY: Thank you. Yesterday, I asked you to talk with your family members about the kind of jobs they have. Look at this chart labeled, "Job Categories." We have been grouping jobs into the following categories: agricultural, industrial, commercial, tourism, and STEM. Remember that we also call these categories professions. When I call your row, come up and place a tally mark in the correct column for each family member you asked about their job.

Note to Teacher: Alternatively, the teacher may make tally marks based on students' raised hands.



STUDENTS DO: Make tally marks in the correct column for each family member's jobs.

TEACHER SAY: Looking at our results, what category has the most jobs and why? Please raise your hand if you would like to share and I will call on you.



STUDENTS DO: Raise hands and share.

TEACHER DO: Encourage students to connect the job with the most tallies to the characteristics of the community. For example, if the community is rural, it would make sense that there are many agricultural jobs.

Note to Teacher: If research was conducted at home, you can extend this lesson by using the data collected to create a bar graph.

5. TEACHER SAY: Let's review the tools we know different jobs use. We can have a Relay Race. I will divide the class into two teams. Each team will send one person to the front of the class. I will name a job and you will race to be the first one to name a tool that job uses. For example, I might say "construction worker" and you might say, "hammer." The team that answers first will get one point. After your turn, go back to your seat and the next person on your team will come up.

Note to Teacher: To extend the race and name more tools, award two points to the first team to answer, then award one point if the other team can name another tool used in the same job.

 **STUDENTS DO:** Contribute answers as part of a **Relay Race** team.

6. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Well done. Today you identified jobs in the local community and the different tools they might use. Let's Popcorn to share what job you think you might be interested in doing.

TEACHER DO: Call on a student to start.

 **STUDENTS DO: Popcorn** to share jobs they might be interested in.

TEACHER SAY: Tomorrow, we will interview a local worker about his or her job. Learning about our community helps us understand who we are.

Lesson 5 Overview

LEARNING OUTCOMES

Students will:
- Explain the importance of a profession to the local community.
- Interview a local worker about his or her job.
- Define income and its importance to the family.
- Identify ways a family can earn income.

KEY VOCABULARY

- Income

MATERIALS

- Chart paper titled, "Interview Questions"
- Markers
- Student book
- Pencils

PREPARATION

In advance, schedule a local community worker as a guest speaker. Ask the speaker to be ready to share a job description, special tools used, why the job is important to the community, what he or she likes and dislikes about the job, and any other interesting facts. The speaker may come to class, use social media, or broadcast live from his or her job. Create a chart titled, "Interview Questions."

LIFE SKILLS

Learn to Live Together

Respect for Diversity:
- Solicit and respect multiple and diverse perspectives to broaden and deepen understanding.

Learn to Know

Critical Thinking:
- Define relationships between different objects.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Today we will interview a local worker about his or her job. Let's Brainstorm questions we might ask. Raise your hand and I will call on you to share. I will record questions so that we can remember them.**



STUDENTS DO: Suggest interview questions.

TEACHER SAY: **Thank you. Some of you remembered questions we investigated during our research. Let me introduce our guest. Listen carefully as our guest shares, and then we will have time to ask questions.**

TEACHER DO: Introduce the guest speaker to the class. Give the speaker time to describe his/her job, special tools used, why the job is important to the community, what he/she likes and dislikes about the job, and any other interesting facts. Allow students an opportunity to ask questions from the brainstormed list. Thank the guest as a group as he/she leaves. If a guest speaker (either live or virtual) is not possible, ask students to **Brainstorm** and record three to five questions to ask a local worker or family member after school.





STUDENTS DO: Listen to the guest speaker and ask appropriate questions.

2. TEACHER SAY: **Thank you for being respectful to our guest. Jobs in our community are important. We need people in all kinds of jobs. Turn to your Shoulder Partner and tell him or her why you think our guest's job is important for our community.**

STUDENTS DO: Share ideas.

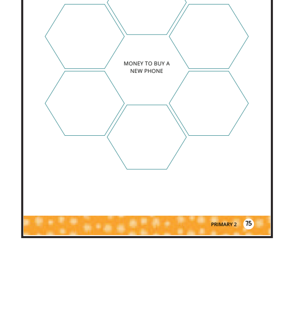
TEACHER SAY: Let's continue learning about why jobs are important. One reason we have not discussed much yet is that they provide people and families with money. When we researched jobs in our community, we looked at the salary the job pays. When you earn money from a job, it is called INCOME. Do you think income is important to your family? Use Think Time to think to yourself.





STUDENTS DO: Use **Think Time** to consider why income is important.

TEACHER DO: Hand out student books and call students' attention to the page, Income.



3. TEACHER SAY: Our friend Nour has a teenage cousin who wants to buy a phone. Nour helps her brainstorm all the ways her cousin can earn some money.



READ ALOUD: Use the graphic organizer to help Nour brainstorm ways to earn money.



STUDENTS DO: Complete the graphic organizer with ways young people can earn income.

TEACHER DO: Use **Calling Sticks** to select some students to share ideas.



STUDENTS DO: Share ideas with the class.

4. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we interviewed a member from our community about his/her job, explored ways to earn income, and considered why income is important. Move around for Shake It Share It High Five to share a way to earn income.



STUDENTS DO: Shake It Share It High Five to summarize ways to earn income.

TEACHER SAY: Tomorrow we will learn more about how income is important in our families and communities.

Lesson 6 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Explain the importance of income in obtaining family resources (food, housing, clothing, transportation). • Describe family members' roles in obtaining resources. • Solve addition and subtraction story problems related to income.	• Income • Resources	• Student book • Pencils

PREPARATION

If you plan to facilitate solving the math problems together as a whole class, copy the problems on large chart paper to display at the front of the room.

LIFE SKILLS

Learn to Be

Communication:
- Good listening.
- Reading, writing, nonverbal communication skills.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Back in our first chapter, we learned about the responsibilities and roles everyone in our family has. I remember Nour helps her dad fix things at home and helps her grandma prepare dinner. What role do your parents have in your family? Take a moment to think.**

TEACHER DO: Provide **Think Time**, then use **Calling Sticks** to have students share ideas.

 STUDENTS DO: Share parents' roles in the family.

TEACHER SAY: **One of the roles your parents have is to earn money for the family. The income they earn is very important. Why do you think income is important? Turn to a Shoulder Partner to share ideas.**

 STUDENTS DO: Share ideas with a **Shoulder Partner**.

TEACHER DO: Use **Calling Sticks** to have students share why they think income is important. Make note if students are able to identify any resources that income buys for the family.

TEACHER SAY: **Much of what you described are examples of income providing RESOURCES for your family. Your parents' income pays for things to meet your needs. Income pays for your home, food, clothing, transportation, and other things that make your life easier or more comfortable. Did you know that your parents make choices on how to use their income? Turn to a Shoulder Partner and share one choice you think your parents make.**

 STUDENTS DO: Share ideas.

Note to Teacher: Depending on your students' abilities in math, you can choose to guide students as a whole group, allow for small groups to collaborate, have individual students solve the problems then share answers

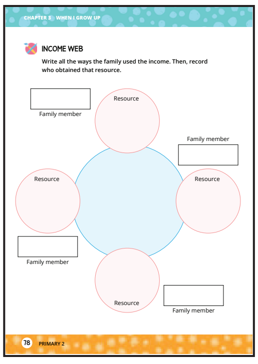
to check for understanding, or a combination of approaches. The math problems involve solving addition and subtraction problems and comparing numbers up to 1,000. After solving the math problems, take time as a whole class to go over answers, emphasizing HOW students solved the problems.

TEACHER DO: Hand out student books and pencils.

TEACHER SAY: Turn to the page Making Choices with Our Income. We will listen to stories about Nour's family and solve problems related to how they are spending income from their jobs.

TEACHER DO: Read aloud the scenarios in the student book. Pause to provide time for students to solve the math problems related to each scenario.

Note to Teacher: Work through at least the first problem as a whole class, with a focus on how to break down the question and find needed information. Ask questions such as, "What are we trying to learn? What information do we know?" Breaking down the problem and moving from words to math sentences reinforces computational thinking.





 **STUDENTS DO:** Complete the math problems embedded in the story.

2. TEACHER SAY: We heard different ways the family members use income to provide resources for the whole family. Let's record what we learned from reading the math scenarios. Turn to the next page, Income Web.

 **READ ALOUD: Write all the ways the family used the income. Then, record who obtained that resource.**

TEACHER DO: Lead the class in **model**ing how to complete one part of the web. For example, write "transportation" in the first circle. Then identify that Mom pays for transportation by writing "Mom" in a smaller circle off the main one. Reread the different scenarios as a whole class and provide **Think Time** for students to consider the resource being obtained and the family member who is responsible. Students can work with a **Shoulder Partner** to complete the web.

 **STUDENTS DO:** Complete the web, identifying how family members use income to obtain resources.

3. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we learned how earning income helps families meet basic needs and obtain important resources. Turn to a Shoulder Partner to share how a member of your family contributes a resource.

 **STUDENTS DO:** Share ideas with a **Shoulder Partner**.

Lesson 7 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • **Model** appropriate on-the-job interactions. • Predict conversations in different job-related scenarios.	• Accountant • Civil Engineer • Electrical Worker • Plumber • Veterinarian • Welder	• Student book • Pencils

LIFE SKILLS

Learn to Live Together

Empathy:

- Demonstrate empathy in communicating with others.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: Yesterday, you described family members' roles in obtaining resources. Share with your Shoulder Partner a few important resources your family needs.



STUDENTS DO: Share with a **Shoulder Partner** resources such as food, housing, clothing, and transportation.

TEACHER DO: Hand out student books.

2. TEACHER SAY: Today we are going to Role Play how professionals interact with each other at work. Role Play means that we will pretend that we are a certain person and we will act out a scene as that person. Let's practice first.

TEACHER DO: Use **Calling Sticks** to select a student to demonstrate **Role Play**.

TEACHER SAY: My role card says I am a person who sells spices. I will act like that person. As my partner, you will act like someone looking to buy spices.

TEACHER DO: Model a **Role Play**, for example:
Teacher: [Wave] Hello, come buy my spices. I can give you a very good price.
Student: What kind of spices do you have?
Teacher: I have many kinds of spices, what is your favorite?
Student: I like saffron.
Teacher: I have very good saffron. It is the best. I will show you.

TEACHER SAY: Very good. Let me select one more student to practice.

TEACHER DO: Use **Calling Sticks** to select a second student to **Role Play**.

TEACHER SAY: This time I am a tour guide at the pyramids and you are a tourist visiting Egypt for the first time.

TEACHER DO: **Model** a second **Role Play** scenario.



CHAPTER 3: WHEN I GROW UP

Lesson 7

JOB ROLE PLAYS

Choose a role and act out a scene with your partner. Then, switch and let your partner choose a role.

Tour Guide	Salesperson	Computer Programmer	Hair Stylist	Artist
Hotel Receptionist	Secretary	Electrical Worker	Robot Maker	Accountant (keeps track of money)
Banker	Farmer	Waiter or Waitress	Musician	Construction Worker
Firefighter	Taxi Driver	Police Officer	Veterinarian	Cook or Chef
Doctor	Jewelry Maker	Gardener	Welder (connects pieces of metal together)	Plumber
Teacher	TV Newscaster	Lawyer	Civil Engineer (builds bridges and buildings)	Pilot

PRIMARY 2 79

TEACHER SAYS: Nicely done. Find a partner and open your student book to the page, Job Role Plays.



STUDENTS DO: Find a partner and open student books to Job Role Plays.

Note to Teacher: Read and explain the jobs as needed. Several of the jobs are listed in the Key Vocabulary for this lesson, but you may wish to review each job title to ensure that all students are familiar with the job. A fun way to implement the activity is to allow students to roll a set of dice and count squares on the ***Role Play*** *sheet. This adds an element of spontaneity as students have to act out the job they "land on" based on the number shown on the dice.*



READ ALOUD: Choose a role and act out a scene with your partner. Then, switch and let your partner choose a role.

Empathy



STUDENTS DO: Take turns **Role Play**ing with a partner.

TEACHER DO: Circulate around the room and listen to scenarios. Prompt students as needed. Assist students with reading the **Role Play** cards if needed.

TEACHER SAY: You did an excellent job acting out different job scenarios. Let's have a few volunteers recreate their scenario for us, and we will see if we can guess your job. Raise your hand if you would like to share with us.



STUDENTS DO: Raise hands to volunteer.

TEACHER DO: Select a few pairs to perform. Ask students to guess the job being acted out.

3. TEACHER SAY: That was fun. We can see that different professionals may act differently depending on their job. When we write a script for a play, we think about what a character might say and how another character would respond. In the next part of this lesson, we will consider what a certain professional might say. Open your student books to the page, I Might Say...



CHAPTER 3: WHEN I GROW UP

I MIGHT SAY...

Choose five jobs from the list on the previous page. On each line, write the name of a job and then complete the sentence, "I might say..."

1.

I might say

2.

I might say

80 PRIMARY 2



STUDENTS DO: Open student books to I Might Say...



READ ALOUD: Choose five jobs from the list on the previous page. On each line, write the name of a job and then complete the sentence, "I might say…."

TEACHER DO: Circulate around the room. assisting as needed.

TEACHER SAY: Let's share what we have written using Shake It Share It High Five.



STUDENTS DO: Share a job and what that person might say using **Shake It Share It High Five**.

4. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Today we acted out what a professional might sound like working at his or her job. Tell your Shoulder Partner why it is important to talk to others at work with respect.



STUDENTS DO: Share ideas with a **Shoulder Partner**.

Lesson 8 Overview

LEARNING OUTCOMES	MATERIALS	PREPARATION
Students will: • Design a job connected to personal interests and strengths. • Ask and answer questions about a specific job.	• Chart paper • Markers • Crayons • Student book • Pencils	Create a chart titled, "Dream Job" and illustrate a sample poster of a fictional job to include: the job category (such as agricultural), a drawing of a worker in action, special skills needed, relevant interests, and special tools.

LIFE SKILLS	
Learn to Know	Learn to Be
Critical Thinking: • Differentiate between reality and imagination. Creativity: • Organize parts to form a new or unique whole.	Accountability: • Provide effective feedback. Communication: • Self-expression.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: Yesterday, you used your imagination to act out conversations professionals might have at their jobs. Today, we will continue using our imaginations. First, we will consider how our personal interests can help us identify a job we would like to have when we grow up. Let's start by reviewing the personal interest survey you completed in an earlier chapter.

TEACHER DO: Hand out student books.

TEACHER SAY: Open your student books to the page, Personal Interest Survey.



STUDENTS DO: Open to the page completed earlier, Personal Interest Survey.

TEACHER SAY: Earlier in this chapter, you discovered your personal interests and strengths. We learned that these interests and strengths might help us in certain categories of jobs. Let's review our interests as a whole class. Stand up when I say a category you are interested in.

TEACHER DO: Slowly say the name of each category (agricultural, industrial, commercial, tourism, and STEM). Give students time to stand and sit down before the next category is called. Encourage students to pay close attention to who stands up each time.





STUDENTS DO: Stand to communicate interests.

TEACHER DO: Ask students to reflect on what they saw using **Calling Sticks** and the following questions.

TEACHER SAY:

- **What category seems to have the most interest?**

- **What category seems to have the least interest?**
- **Which category had more girls stand up?**
- **Which category had more boys stand up?**

 STUDENTS DO: Share observations and reflections.

2. TEACHER SAY: **We are exploring the big question: Who am I? We have identified interests and strengths, researched jobs in our community, listened to a guest speaker, and role-played workplace conversations. Today, let's use all that we have done to think about a job we might want to have in the future. Let's read about our friend Nour and how she chose a job that interested her. Open to the page, Nour Chooses a Job.**

 READ ALOUD: **As you read along, underline Nour's strengths and interests.**

 STUDENTS DO: Read along and underline Nour's strengths and interests.

TEACHER SAY: **Review the interests and strengths you underlined. What category of job do you think Nour might be interested in? Write your answer on the line below the story.**

 STUDENTS DO: Select a category of job based on Nour's strengths and interests.

TEACHER SAY: **What jobs do you think Nour would be interested in doing? Write your answer on the next line.**

 STUDENTS DO: Record possible jobs that might interest Nour.

Note to Teacher: Students can refer to Job **Role Plays** *for a list of jobs.*

3. TEACHER SAY: **Our world is constantly changing. There may be jobs for you to do in the future that do not even exist right now. Before computers existed, there were no jobs for computer programmers. We are going to invent a dream job based on our personal strengths and interests. For example, I love cooking and 3D printing. My ideal job in the future would be to create 3D food. My job would be called "3D food chef."**

Use several minutes of quiet Think Time as you review your survey and think about a dream job for your future.



 STUDENTS DO: Use **Think Time** to brainstorm a dream job.



Note to Teacher: Allow students to have fun with this task and encourage creativity.

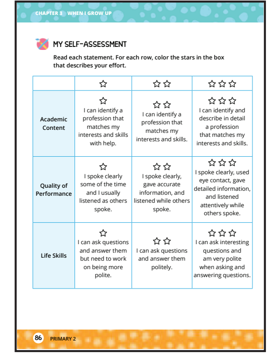
TEACHER SAY: **Now turn to a Shoulder Partner and share one or two ideas.**

 STUDENTS DO: Share creative ideas.

TEACHER DO: Show students the chart paper labeled, "Dream Job." Point to the different parts of the poster as you describe the requirements to the students.

4. TEACHER SAY: **Tomorrow, you will create a poster to advertise you dream job of the future. Your poster will include the following:**

- **Title of your job.**
- **The category or profession your job would fit into.**
- **A drawing of you doing your job.**
- **Special tools you would use.**
- **Special skills or interests you would need.**


CHAPTER 3 WHEN I GROW UP

MY SELF-ASSESSMENT

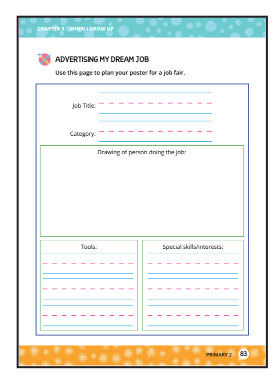
Read each statement. For each row, color the stars in the box that describes your effort.

	☆	☆☆	☆☆☆
Academic Content	☆ I can identify a profession that matches my interests and skills with help.	☆☆ I can identify a profession that matches my interests and skills.	☆☆☆ I can identify and describe in detail a profession that matches my interests and skills.
Quality of Performance	☆ I spoke clearly some of the time and I usually listened as others spoke.	☆☆ I spoke clearly, gave accurate information, and listened while others spoke.	☆☆☆ I spoke clearly, used eye contact, gave detailed information, and listened attentively while others spoke.
Life Skills	☆ I can ask questions and answer them but need to work on being more polite.	☆☆ I can ask questions and answer them politely.	☆☆☆ I can ask interesting questions and am very polite when asking and answering questions.

86 PRIMARY 2

TEACHER DO: Turn to the page, My Self-Assessment and review the expectations for the project. Be sure to emphasize the different aspects of the assessment, including identifying a profession, speaking clearly and asking and answering questions politely.

5. TEACHER SAY: **For our Share project, we will hang up the posters and host a job fair where everyone can see the jobs you have created. Today, you will plan your poster and ask each other**


CHAPTER 3 · WHEN I GROW UP

ADVERTISING MY DREAM JOB

Use this page to plan your poster for a job fair.

Job Title:

Category:

Drawing of person doing the job:

Tools:

Special skills/interests:

PRIMARY 2 83

questions about the job you create. Open your student books to the page, Advertising My Dream Job.

 READ ALOUD: **Use this page to plan your poster for a job fair.**

 STUDENTS DO: Plan a job poster describing a fictional dream job.

TEACHER DO: Circulate around the room as students work and assist as needed.

6. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: **Today we designed a job based on our interests and strengths. Share with your Shoulder Partner the name of the job you created.**

 STUDENTS DO: Share the name of a job they created with a **Shoulder Partner**.

TEACHER SAY: **Now share your plan for your poster with your Shoulder Partner. Your partner will ask you questions about your dream job. Make changes to your plan based on their questions.**



 STUDENTS DO: Share poster plan, ask questions, and make changes as needed to the poster plan.

TEACHER SAY: **Tomorrow, we will use our plan to create a poster to advertise our job. Do you think other people might want to do the job you created?**

Lesson 9 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Create a poster to share information about a desired job.	• Advertise • Job fair	• Chart from previous day titled, “Dream Job” • Chart paper • Markers, crayons • Fliers for actual jobs (if possible) • Student book • Pencils

PREPARATION

If possible, show students fliers for actual jobs.

LIFE SKILLS

Learn to Know	Learn to Be
Critical Thinking: • Differentiate between reality and imagination. Creativity: • Organize parts to form a new or unique whole.	Accountability: • Provide effective feedback.



Share (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today’s lesson.

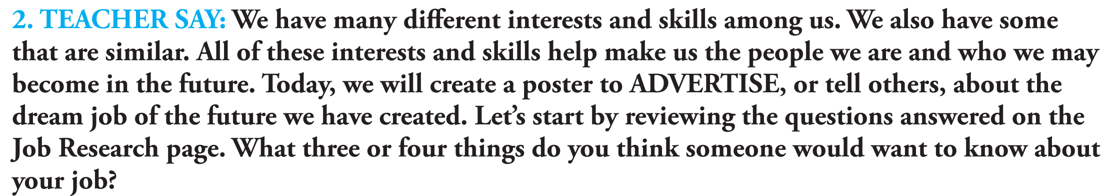
TEACHER SAY: **Yesterday, we created new, exciting jobs of the future based on our personal interests and skills. Let’s Popcorn to describe one of your personal interests or skills.**



STUDENTS DO: **Popcorn** to share a personal interest or skill.





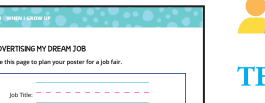


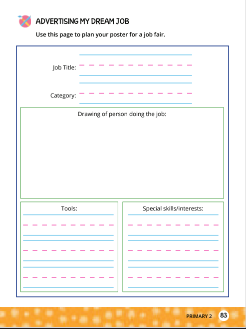
2. TEACHER SAY: We have many different interests and skills among us. We also have some that are similar. All of these interests and skills help make us the people we are and who we may become in the future. Today, we will create a poster to ADVERTISE, or tell others, about the dream job of the future we have created. Let’s start by reviewing the questions answered on the Job Research page. What three or four things do you think someone would want to know about your job?



STUDENTS DO: Consider what information to include on the poster.

TEACHER SAY: **Use your plan on the page, Advertising My Dream Job, to help you create your poster.**

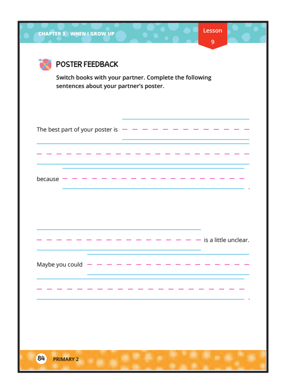




Note to Teacher: Have chart paper, makers, and crayons available for students. You can choose to have other craft materials from the room available, such as construction paper, scissors, and glue.



STUDENTS DO: Create dream job posters using research and planning completed in previous lessons.


CHAPTER 3 WHEN I GROW UP

Lesson 9

POSTER FEEDBACK

Switch books with your partner. Complete the following sentences about your partner's poster.

The best part of your poster is ______

because ______.

______ is a little unclear.

Maybe you could ______.

84 PRIMARY 2



TEACHER DO: Circulate around the room, offering assistance as needed. If students finish early, request that they assist students who are still working. Bring students back together as a class when there are 15 minutes left.

TEACHER SAY: You have been working very hard on your posters. Tomorrow, we will share them with more classmates. For now, turn to your Shoulder Partner to share your poster. Turn to the page Poster Feedback. Hand your student book to your partner. After you share, complete the sentences in your partner's book to provide feedback.



STUDENTS DO: Work with partners to provide feedback.

Note to Teacher: Collect student posters at the end of the class to hang for the next lesson.

3. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Tomorrow, we will host a job fair. A job fair is where people who want to find a job talk with people who want to give someone a job. Imagine you need to hire a partner to help you with your dream job. Spend a moment of Think Time to consider how you might convince someone to apply for your job.

Lesson 10 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Present posters to classmates. • Ask and answer questions with peers about various jobs.	• Performance	• Student-created posters • Student book • Pencils

PREPARATION

Hang student posters in the hallway or around the room.

LIFE SKILLS

Learn to Be	Learn to Work
Communication: • Good listening. • Self-expression. • Reading, writing, and nonverbal communication skills.	Collaboration: • Respect for other opinions.



Share (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Yesterday, we created posters to teach others about our dream job. We used various art materials to design the posters now hanging around the room. Turn to a Shoulder Partner and share what on your poster makes you feel the most proud.**



STUDENTS DO: Share pride points.

2. TEACHER SAY: **Everyone was very creative in designing their posters. Today we will share our future dream jobs. Half of the class will stand at their posters. The other half will walk around and ask questions to learn more about the job. Let's think first. What type of questions can we ask to help us learn more about a job?**

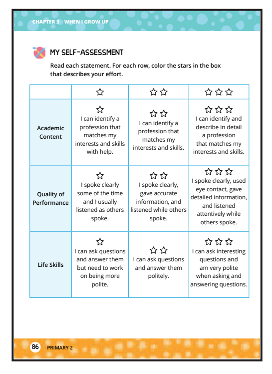
TEACHER DO: Provide Think Time.

TEACHER SAY: **Turn to a Shoulder Partner to share a question idea.**



STUDENTS DO: Share questions with a Shoulder Partner.

TEACHER DO: Use Calling Sticks to ask six to eight students to share questions. Record relevant questions for students to ask on chart paper.



CHAPTER 3 WHEN I GROW UP

MY SELF-ASSESSMENT

Read each statement. For each row, color the stars in the box that describes your effort.

	☆	☆☆	☆☆☆
Academic Content	☆ I can identify a profession that matches my interests and skills with help.	☆☆ I can identify a profession that matches my interests and skills.	☆☆☆ I can identify and describe in detail a profession that matches my interests and skills.
Quality of Performance	☆ I spoke clearly some of the time and I usually listened as others spoke.	☆☆ I spoke clearly, gave accurate information, and listened while others spoke.	☆☆☆ I spoke clearly, used eye contact, gave detailed information, and listened attentively while others spoke.
Life Skills	☆ I can ask questions and answer them but need to work on being more polite.	☆☆ I can ask questions and answer them politely.	☆☆☆ I can ask interesting questions and am very polite when asking and answering questions.

86 PRIMARY 2

3. TEACHER DO: Hand out student books. Hold up the student book page My Self-Assessment. Remind students or have one student explain how the rubric is set up. Then, read the squares in the second column (two stars) to explain what the expectations are for the project.

TEACHER SAY: **After we have completed sharing, we will assess our own work using this page.**

4. TEACHER DO: Divide the class in half. Half of the students will stand by their posters while the other half will move around the room. Review expectations for politely asking and answering questions. Encourage students to visit as many jobs as they can before being directed to switch. Use your judgement about how much time to provide before switching groups.

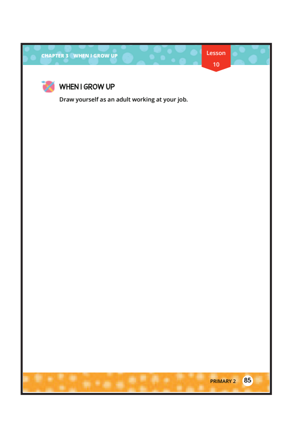
 **STUDENTS DO:** Present, ask, and answer questions about dream jobs.

5. TEACHER DO: Direct students to go back to their seats with their student books.

TEACHER SAY: Open to the page My Self-Assessment. I will read through the rubric one row at a time. Fill in the stars above the box that best describes your work.

TEACHER DO: Read through each row of the student rubric, having students first consider the middle column. Then verbally note, "If you did not quite reach that level, the one-star box says…" and, "If you exceeded that level, the three-star box says…"

 **STUDENTS DO:** Complete the student rubric to assess individual work on the project.



6. TEACHER SAY: Great job assessing your work. We have been learning how careers can match our interests and skills. We have designed a dream job and we have also learned about real jobs that exist in our community. Turn to the page When I Grow Up in your student book.

 **READ ALOUD: Draw yourself as an adult working at your job.**

TEACHER SAY: You can draw a real job that we have learned about or a dream job that was shared at our class job fair. Make sure you draw yourself where you are working and using the special tools your job will need.

 **STUDENTS DO:** Draw a picture to show themselves working as an adult.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Who can summarize what we have studied in this chapter?

TEACHER DO: Use **Calling Sticks** to select four students to share ideas on what they learned in this chapter. Modify the number of students based on the time you have left in class. Have students thank partners for working with them.

TEACHER SAY: We have just finished our last chapter in our theme, "Who Am I?" We learned about roles and responsibilities in our families, ways we can make safe choices for ourselves, and what we see ourselves becoming as we grow up. Tomorrow we will begin our next theme.

Rubric Assessment (for teacher use)

	Approaching Expectation (1)	Meeting Expectation (2)	Exceeding Expectation (3)
Academic Content	Identifies jobs held by people in the community but cannot identify the tools or skills used by those professionals. *Social Studies D.2.c.*	Identifies several jobs held by people in the community and some tools or skills used by those professionals. *Social Studies D.2.c.*	Identifies a variety of jobs held by people in the community and offers details about the tools and skills used by those professionals. *Social Studies D.2.c.*
	Explains the difference between interests and strengths and is able to provide abstract examples of each with help. *Vocational Fields A.4.b.*	Explains the difference between interests and strengths and is able to provide a personal example of each. *Vocational Fields A.4.b.*	Explains the difference between interests and strengths and is able to provide several personal examples of each while connecting them to professions. *Vocational Fields A.4.b.*
	Uses a graphic organizer to plan information for the job poster with help. *Writing D.1.a.*	Uses a graphic organizer correctly to plan information for the job poster. *Writing D.1.a.*	Creates an effective, original graphic organizer to plan relevant information for the job poster. *Writing D.1.a.*
	Participates minimally in collaborative conversations and may not share ideas. *Speaking and Listening A.1.a.*	Participates in collaborative conversations by sharing ideas and responding to the thoughts of others. *Speaking and Listening A.1.a.*	Participates in collaborative conversations and works to ensure that others are given equal opportunities to share ideas and respond to the thoughts of others. *Speaking and Listening A.1.a.*
Quality of Performance	Speaks to audience members but may be difficult to hear or understand.	Speaks clearly to audience members.	Speaks clearly to audience members with confidence and creativity.
	Creates visuals that are not very neat or are difficult to read.	Creates visuals that are neat and easy to read.	Creates appealing visuals that are exceptionally neat and easy to read.
Life Skills	Manages or organizes tasks ineffectively or only with the help of peers or the teacher.	Manages and organizes tasks effectively and independently.	Manages and organizes tasks effectively and helps to organize peers.
	Assesses self using a rubric with help and may have a hard time understanding how to meet expectations.	Assesses self accurately using a rubric.	Assesses self accurately using a rubric and is able to set goals for future work.

PRIMARY 2

Multidisciplinary

WORLD AROUND ME

Chapter 1:
What Is in the Night Sky?

Theme Overview

What Is in the Night Sky?

COMPONENT	DESCRIPTION	LESSONS
Discover	Students use patterns to begin an exploration of the night sky and constellations. Students explore the night sky individually and record observations to discuss with the class. Students practice listening and communicating.	2
Learn	Students learn the relationship between the star Sirius and the annual flooding of the Nile. Through experimentation, students demonstrate that stars farther away seem smaller and dimmer than the nearest star, our sun. Students identify the telescope as a tool that is used to better see objects in the night sky.	5
Share	Students work cooperatively to create a classroom planetarium. In teams, students present their learning through images, written work, and oral presentations as tour guides in the planetarium.	3

Connection to Issues



Environment and Development: Our earth and environment need to be sustained. We can appreciate and care for the environment as a community.

Life Skills Addressed



DIMENSION	DESCRIPTION
Learn to Know	**Critical Thinking:** • Differentiate between reality and imagination.
Learn to Work	**Collaboration:** • Review individual behaviors with the team. • Respect for other opinions.
Learn to Be	**Self-Management:** • Segment goals into specific steps. **Communication:** • Good listening. • Self-expression. • Reading, writing, nonverbal communication skills.

Learning Indicators

Throughout this chapter, students will work toward the following learning indicators:

READING:

D. Reading Skills: Fluency

1.a. Read texts at grade-appropriate difficulty with a level of accuracy and fluency to support understanding.
1.b. Read a variety of texts, recognizing and understanding the purpose of the text.
1.c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

E. Reading Comprehension: Literature

1.a. Ask and answer questions (who, what, where, when, why, and how) about key details in a text.
1.b. Describe how characters in a story respond to major events and challenges.

F. Reading Comprehension: Informational Text

1.a. Follow written instructions.
1.b. Ask and answer questions (who, what, where, when, why, and how) about key details in a text.
8.a. Read and comprehend informational text at appropriate difficulty level for Primary 2.

G. Language: Vocabulary Acquisition and Use

1.a. Use sentence-level context to infer, confirm, or correct the meaning of words.
1.g. Demonstrate command of the conventions of grammar and usage when writing or speaking.

WRITING:

A. Foundational Skills

1.a. Write complete sentences.

B. Narrative

1.c. Arrange events sequentially in a story and use temporal words to signal event order.

D. Process, Production, and Research

2.a. Use a variety of digital tools to produce and publish writing, independently and in collaboration with peers.

SPEAKING AND LISTENING:

A. Foundational Skills

1.a. Participate in collaborative conversations with peers and adults about various topics and texts.
3.a. Use audio, digital, and visual media (drawings or displays) in presentations.

MATH:

B. Operations and Algebraic Thinking

1.b. Fluently add and subtract within 20 using mental strategies.

C. Number and Operations in Base Ten

2.a. Apply a variety of problem-solving strategies based on concrete **models** or drawings, place value concepts, properties of operations, and/or the relationship between addition and subtraction and relate the strategy to a written method.

E. Geometry

1.c. Identify and draw shapes having specified attributes, such as a given number of corners (vertices) or sides.

SCIENCES:

A. Skills and Processes

1.b. With guidance, cooperate to plan and conduct an investigation with peers.
1.c. Use observations to describe patterns.
1.d. Use observations to explain an experience.
1.g. Communicate information with others in oral and written forms.

B. Earth and Space

1.a. Describe objects in the night sky as seen with the naked eye and telescope.
1.b. Observe differences in size and brightness of various stars in the sky, explaining the reason for the differences.

SOCIAL STUDIES:

C. Understanding the World from a Spatial Perspective

1.a. Identify and use geographic tools that aid in determining the locations of places on Earth.
1.c. Identify the location of Egypt and Egypt's main regions on a map.

VISUAL ART:

A. Producing Visual Art

2.a. Use various drawing and coloring tools to create art.
2.f. Collaborate to produce art with peers.

MUSIC:

D. Singing

3. Write new words to a song in order to express learning content.

ECONOMICS AND APPLIED SCIENCES:

A. Family Relationships and Safety in the Community

2.a. Express positive attitudes toward self and others.
2.c. Celebrate and encourage peers.

VOCATIONAL FIELDS:

A. Career Social Skills and Preparation

1.a. Identify how to cooperate at both home and school.
1.b. Work cooperatively with another student to accomplish a task.
1.c. Explain and demonstrate the group interaction terms participate and cooperate.
4.b. Identify and describe the function of tools in various professions.

INFORMATION AND COMMUNICATION TECHNOLOGIES:

C. Technological Production Tools

1.a. Use digital technologies (such as a computer) appropriately to support learning.

1.b. Identify the appropriate program or application to complete a task.

1.c. With support, use digital sources to search for and collect content to answer a specific question.

2.a. Use variety of age-appropriate digital tools (such as drawing program or presentation software) to communicate and exchange ideas.

2.b. Design digital projects that suit students' interests and capacities.

COMPUTATIONAL THINKING:

Math

C.2.a. Apply a variety of problem-solving strategies based on concrete models or drawings, place value concepts, properties of operations, and/or the relationship between addition and subtraction and relate the strategy to a written method.

CH 1 Pacing Guide

LESSON	INSTRUCTIONAL FOCUS
1	DISCOVER: **Students will:** • With prompting, recall learning from Primary 1. • Explain basic differences between the day and night skies. • Listen attentively while working with partners and in small groups.
2	DISCOVER: **Students will:** • Discover observed patterns in the arrangements of the stars (constellations). • Recognize Orion's Belt in the night sky. • Create lyrics to remember new vocabulary.
3	LEARN: **Students will:** • Describe how the stars appear to rise and set each night. • Explain that rise and set times change slightly every day. • Practice mental subtraction strategies. • Read to understand the relationship between the star Sirius and the annual flooding of the Nile.
4	LEARN: **Students will:** • Hypothesize that the sun is a star and begin an investigation into this hypothesis. • Compare observable properties of the sun and the stars.
5	LEARN: **Students will:** • Demonstrate that objects appear smaller when they are farther away. • Use a **model** to compare relative size.
6	LEARN: **Students will:** • Explain that light sources appear dimmer when they are farther away. • Explain that the sun appears different than the other stars because it is closer to Earth. • Recognize galaxies as being made up of stars. • Identify the telescope as a tool for learning about the deep sky.
7	LEARN: **Students will:** • Write a story with a beginning, middle, and end. • Use information learned to write a creative story. • Use illustration to support writing.
8	SHARE: **Students will:** • Review key learning to identify important facts. • Collaborate to produce a work of art on a constellation. • Use appropriate tools to produce art.
9	SHARE: **Students will:** • Manage and organize tasks to complete the Share project. • Work cooperatively in groups. • Provide effective feedback within group.
10	SHARE: **Students will:** • Use communication skills to orally present information. • Work collaboratively to present with a group. • Self-assess using the student rubric.

Materials Used

Student book

Pencils

Crayons

Chart paper

Board

Markers

Teachers object

Piece of paper

Flashlight

Large construction paper

White paper

Yellow crayon

Black paint

Lined paper

Constellation displays

Supplies for presentations

Student projects

Lesson 1 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • With prompting, recall learning from Primary 1. • Explain basic differences between the day and night skies. • Listen attentively while working with partners and in small groups.	• Day sky • Night sky • Planetarium	• Student book • Pencils • Crayons • Chart paper or board • Markers

PREPARATION

The Share project asks students to be tour guides by teaching others about the night sky. Students will present using a visual display, written facts, and an oral presentation. If students have computer access, the project may include digital images or presentation aids. Throughout the chapter, encourage students to gather images from written and/or digital sources.

If available, supply books that tell stories about constellations and deep space.

You may want to invite another classroom or parents to the final presentation day. Consider having students write invitations.

LIFE SKILLS

Learn to Be

Communication:

- Good listening.
- Self-expression.
- Reading, writing, non-verbal communication skills.



Discover (90 minutes)

Directions

1. Introduction: Use the start of every chapter to announce the new topic, relate it to students' lives, and introduce the Share project that the chapter builds toward.

This is a time to excite your students about the chapter. Tell them they are beginning a chapter of study called, "What Is in the Night Sky?"

Note to Teacher: If your students were not involved in the Education 2.0 program in Primary 1, adjust the introductory discussion to have students share some of the things they learned in the previous chapter, "Who Am I?"

TEACHER SAY: We are starting a new theme called "The World Around Me." You learned so much in Primary 1. Let's see what we can remember. This will help us understand the theme, "The World Around Me." You learned about living and non-living things in Primary 1. What do you remember about living and non-living things?

TEACHER DO: Use **Calling Sticks** to choose two or three students to answer the question before continuing.

TEACHER SAY: You also learned about plants and animals. First, we will use some Think Time. How are plants and animals different?

TEACHER DO: Allow about 30 seconds for students to think before sharing.

TEACHER SAY: Now turn to your Shoulder Partner. Each of you share two things you learned in Primary 1 about plants and animals.

 **STUDENTS DO:** Share what they remember learning about plants and animals.

TEACHER SAY: In Primary 1, you learned about important Egyptian monuments. Can you name three important Egyptian monuments?

TEACHER DO: Use **Calling Sticks** to choose three students to answer the question before continuing.

TEACHER SAY: These are good examples of what you learned in Primary 1. Now, let's think about what the theme title means. The title is "The World Around Me." What other kinds of things might we learn in this theme? Share ideas with your table.



TEACHER DO: Walk around and listen to students' discussions. It is not important to share these ideas as a whole group. This is an opportunity for students to practice listening and sharing ideas .

TEACHER SAY: I heard some good ideas. Remembering what we learned last year will help us learn new things. Our first chapter for "The World Around Me" is called "What Is in the Night Sky?" Which senses do you think we will use in this chapter? Point to the body part that you think you will use.

TEACHER DO: If students need more support, **model** pointing to your nose and asking, "Do you think we will use the sense of smell to answer the question, 'What is in the night sky?'" Choose two students to explain their thinking.

 **STUDENTS DO:** Respond by pointing to the sense they anticipate using.

TEACHER SAY: We use all our senses as we learn. For this chapter, we will learn about what we see. The main sense we will use is sight. Thank you for sharing some of what you learned in Primary 1.



CHAPTER 1 WHAT IS IN THE NIGHT SKY? Lesson 1

NOUR AND HOSSAM

Look at the illustrations. Read the story. Circle words you do not know.

Nour and her neighbor Hossam walk home from school. They hear a plane cross the sky.

Nour points to a cloud.
She says, "Look at the cloud.
It looks like my cat."

Hossam says, "Yes, it does."

Hossam points to another cloud.
"This one looks like a pillow."

Nour smiles. She says, "Last night I saw the moon and the stars."

Hossam says, "Sometimes I wonder. Why does the sky change so much?"

PRIMARY 2 91

2. TEACHER SAY: Let's begin our new theme by reading a new story. Please take out your student book and turn to the page Nour and Hossam.

TEACHER DO: Pause until most students find the correct page. Hold up a student book if needed so that students can see what the page looks like.

TEACHER SAY: First, look at the pictures. What do you notice about Nour and Hossam? Talk with your Shoulder Partner.

 **STUDENTS DO:** Share conclusions based on the pictures.

TEACHER DO: Walk around, listen to discussions, and make certain students are taking turns. After two minutes, bring students back together for discussion using the strategy, **Hands Up**.

Note to Teacher: If this strategy has not yet been practiced in the classroom, take time to teach it to the students now. Hold a hand in the air to signal that students should stop what they are doing, stop talking, and look up at the teacher. When students notice the teacher's hand up, they also raise a hand to signal to classmates. This strategy is used as an attention getting signal.

TEACHER DO: Call on two or three students to share ideas with the class. Accept all answers. Students are sharing original ideas.

TEACHER SAY: I am curious about our new friends. Nour and Hossam will be in all our stories in this theme, just like Nour in our first theme. Let's find out what Nour and Hossam are discussing. Follow along as I read the instructions.

 **READ ALOUD: Look at the illustrations. Read the story. Circle words you do not know.**

Note to Teacher: Adjust the directions as needed for your students' literacy levels. If you have a few students who are not yet ready to read independently, pair the student with a reader. If many students have trouble with the text, read it aloud first, then have students attempt to read it again independently.

TEACHER SAY: Please read the story silently. If you have trouble with a word, be sure to circle it with your pencil. Then we will come back to practice it later.

 **STUDENTS DO:** Read silently, circling words they do not know.

TEACHER DO: As students finish, encourage them to think about how the words and the illustrations together tell the story. Show **Hands Up** to gain attention.

TEACHER SAY: I will read the story aloud now. Please follow along to make certain you know all the words.

TEACHER DO: Read the story aloud, pausing between lines.

 **STUDENTS DO:** Read along, either orally or silently.

TEACHER SAY: What is the first thing Nour sees in the sky?

 **STUDENTS DO:** Raise hands to answer.

TEACHER SAY: Have you ever looked at clouds and seen shapes in them? What two shapes did Nour and Hossam see in the clouds?

TEACHER DO: Choose two students to respond. Continue to facilitate a discussion of the text, asking students to recall details and connect their own lives and experiences to the text. After each of the following suggested questions, allow students to respond using **Calling Sticks**, raised hands, or another strategy.



TEACHER SAY:
- **What are some other things Hossam and Nour see in the sky?**
- **What do you see in the sky when you look up?**
- **I like to use my imagination too. What does Hossam wonder at the end of today's story?**

3. TEACHER SAY: One of the things we will learn about in this chapter is our sky. Nour and Hossam are looking at the sky during the day. What is the difference between the night sky and the day sky? Let's turn to the next page in your student book, I Think.

Note to Teacher: The activity that follows is designed to be a preassessment, allowing you to observe what knowledge and skills students already have about the day and night sky. Encourage students to work independently so that they can express what they already know. Opportunities like this, for formative assessment, will allow you to adjust your instruction to better meet the needs of the class.

TEACHER DO: Use chart paper or the board to create two columns similar to the student book. One column title is "Night Sky" and the second is "Day Sky."

TEACHER SAY: You will need a pencil and one crayon.

TEACHER DO: Take a moment to scan the class, making certain all students are on the correct page and have correct supplies. If possible, all students should have a crayon other than black, so others' ideas are easily seen.

TEACHER SAY: Please read the directions with your Shoulder Partner. If you have time, begin thinking about your answers. Do not write anything yet.

 **STUDENTS DO:** Read directions with **Shoulder Partner**.

TEACHER SAY: Who can tell us the directions using your own words?

TEACHER DO: Choose one student to share. If more complete directions are needed, call on another student.

TEACHER SAY: Let's start this page working together. I will use the Calling Sticks to choose two people to start our lists.

TEACHER DO: Model how to begin each list using one observation from students for each column. Guide students to copy the words correctly in their student books and in the correct column. If students struggle with writing ideas, encourage the use of pictures.

TEACHER SAY: Now it is your turn. We will begin with Think Time. You will use your pencil to write your answers. Write as many ideas as you can in each column. This is a time to work by yourself. If you have any questions, raise your hand and I will help you.



 **STUDENTS DO:** Work independently to list what is in the night sky and day sky.

Note to Teacher: Using a pencil for this first task is important so that new responses from the next discussion can be added in crayon.

TEACHER SAY: I see you have many ideas. Let's record some of our ideas on the board. When you hear a new idea, add that idea in crayon to your list. Let's Popcorn to share. I will choose the first student to start.

TEACHER DO: Choose one student, then **Popcorn**. Challenge students to think of more than five descriptions for each column.

 **STUDENTS DO:** Listen carefully and add new ideas to the columns with crayon.

4. TEACHER SAY: Let's take time to finish this page. Color the day and night skies at the bottom of the page. When we all finish, we will share our drawings.

 **STUDENTS DO:** Complete the page and prepare to share.

5. TEACHER SAY: Let's share our drawings in groups.

TEACHER DO: Divide students into small groups for sharing. Choose a leader for each group.

TEACHER SAY: The group leader will make certain everyone in the group has time to share. What are some ways to make sure everyone has time to talk?



 **STUDENTS DO:** Share ideas, such as limiting time, asking for one thing shared by each student, making certain only one person shares at a time, and so on.

TEACHER SAY: As I walk around the room, I know I will see students sharing and listening to each other. Group leaders, please choose your first speaker.

 **STUDENTS DO:** Share and listen within their groups.

TEACHER DO: Walk around the classroom, making certain students are using the life skills of working cooperatively and listening to others. After all students have had time to share, bring students back together using **Hands Up**.

6. TEACHER SAY: Thank you for helping us begin our discussion about how the sky is different from day to night. In this chapter we will learn about our night sky. Our Share project will be to create a planetarium in our classroom. Does anyone know what a planetarium is?

 **STUDENTS DO:** Respond with ideas.

TEACHER DO: Write the word "planetarium" on the board.

TEACHER SAY: You all have good ideas. A planetarium is a place people go to learn about the night sky. Since this is such an important word, let's make sure we remember its meaning.

TEACHER DO: Guide students to create lyrics to a familiar medley as a way to remember definitions. You will add to this lyric through the chapter. As an example, students may create a lyric such as, "Planetarium, planetarium, a place to learn about our sky." Once there is an agreed upon lyric, ask students to stand and sing it together a few times. This is used as a tool to learn vocabulary words.

 **STUDENTS DO:** Create lyrics to familiar medley for planetarium definition.

TEACHER SAY: This is a great way to remember all the important words we are learning. When we make our classroom into a planetarium, you will all be tour guides. You will create art that shows what the night sky looks like, write important facts you want others to know, and then

present your information. Does anyone have questions about the project?

 STUDENTS DO: Ask questions.

TEACHER DO: Answer any questions students may have about a planetarium.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Thank you for working so well today. I saw very good cooperation as everyone shared ideas. Turn to your Shoulder Partner and tell them one new thing you learned from a classmate today.

 STUDENTS DO: Share something new they learned.

TEACHER SAY: Tomorrow we will learn more about our night sky. Tonight, please ask someone in your family to go outside with you to look at the night sky. What do you see? I wonder if you will see the same thing I see.

TEACHER DO: Direct students to thank each other at the table and put supplies away.

Lesson 2 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Discover observed patterns in the arrangements of the stars (constellations). • Create lyrics to remember new vocabulary.	• Constellation • Human-made • Natural	• Student book • Pencils • Crayons • Chart paper or board

LIFE SKILLS	
Learn to Know	Learn to Be
Critical Thinking: • Differentiate between reality and imagination.	Communication: • Self-expression. • Reading, writing, non-verbal communication skills.



Discover (90 minutes)

Directions

1.Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen. This is a time to connect yesterday's lesson to today's lesson.

TEACHER SAY: Yesterday, we met Nour and Hossam. They were talking about what they saw in the sky during the day. Today we will learn about what you can see in the sky at night. Raise your hand if you were able to look up at the sky last night.

TEACHER DO: Call on students with raised hands to share what they saw.





STUDENTS DO: Share observations.

2.TEACHER SAY: Thank you for sharing. In our last lesson, we wrote a list from memory about what we see in the night sky. Turn in your student book to the page I Think and read your list again. Let's see if we have anything to add.

TEACHER DO: Allow time for student review.



TEACHER SAY: Did your observations last night match what you wrote? Please work with your Shoulder Partner and discuss whether everything that you saw last night is on your list.

TEACHER DO: Give students a few minutes to discuss.

TEACHER SAY: You may add things to your list if you missed something in the first list. You may also cross things off your list if you did not see them last night. We will share with the class in a few minutes.

TEACHER DO: Allow time for students to reread the lists with a partner. As you walk around the room, check to see that students are taking turns reading and listening to each other.

 **STUDENTS DO:** Review lists and update as needed based on observations.

3. TEACHER SAY: Very good. Now let's make a class list of the things we saw last night.

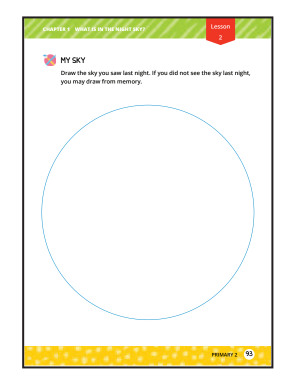
TEACHER DO: Use **Calling Sticks** to choose students to answer the question before continuing.

 **STUDENTS DO:** Share observations.

TEACHER DO: Write students' answers on the board or on chart paper.

TEACHER SAY: Let's focus on the natural parts of our night sky. Is anything on our list made by humans?

TEACHER DO: Call on a few students to answer. Cross out the human-made objects on the class list and circle the natural ones as students categorize the list. (Human-made objects, such as airplanes, are not of interest for this lesson.)



TEACHER SAY: Very good. I have circled the natural objects in our night sky. This is what we will focus on in our chapter.

4. TEACHER SAY: Please turn to the page in your student book called My Sky. Read the directions carefully with your Shoulder Partner. [Pause]. Who can tell us the directions using their own words?

TEACHER DO: Choose one student to share. If more complete directions are needed, call on another student.

TEACHER SAY: Very good. Now please use your crayons to draw the sky you saw last night. This should be based on your observations and might be different than what you colored from memory yesterday.

TEACHER DO: Allow students sufficient time to draw the sky. Walk around to be sure students understand that if they did not see the sky last night, they can draw from memory. As students finish, lead a discussion about decisions made during the task. Use **Calling Sticks**, raised hands, or **Popcorn** to choose students to answer questions such as those suggested below.

TEACHER SAY:

- **What color did you pick for the night sky?**
- **Did you use one color or many colors?**
- **Why did you choose your colors?**
- **Did you draw stars?**
- **What color did you use for the stars?**

5. TEACHER SAY: You made lots of decisions as you drew what you observed. Turn to your Shoulder Partner and explain one difference between what you drew in our previous lesson and what you drew today from your observations.

 **STUDENTS DO:** Identify and share differences in the two drawings.

TEACHER SAY: When you were looking at the sky last night, did anyone see a pattern or a shape?



TEACHER DO: Continue with the **Popcorn** strategy.



 **STUDENTS DO: Popcorn** to answer.

TEACHER SAY: People have been finding patterns and recognizing shapes in the stars for a very long time—for thousands of years, in fact. Let's see what you observe. Turn to the page Shapes in the Sky in your student books. When we look at the sky on a clear night, some stars look brighter than others. In these pictures, some stars have been highlighted by an artist. Looking at those and other stars, what shapes do you see? Talk to a Shoulder Partner first.

 **STUDENTS DO:** Discuss shapes or patterns in the two images of the night sky.

TEACHER SAY: Who wants to share a shape or pattern that you see? We will all look for what you see.

TEACHER DO: Call on five to ten students to share observed patterns and have each stand up to point out the shape. Remind students that it is okay if not everyone sees the same shape. This is simply an exercise of close observation. If students are excited and eager to share shapes not mentioned previously, continue the conversation to reinforce the wonder of how big and intricate the night sky is.

 **STUDENTS DO:** Volunteer to share shapes and patterns observed.

TEACHER SAY: It is okay if you cannot see a shape someone else sees. There are a lot of possibilities in these images. Remember how Nour and Hossam thought clouds looked like shapes? Clouds are always changing shape as the water that makes them moves through the air. What people long ago realized is that they saw the same shapes in the sky night after night. They began to name the shapes and tell stories about what they saw. Turn to your Shoulder Partner and tell them a story about a shape you see in these images.

TEACHER DO: Model this instruction for students, if needed, with a simple story such as a square and a triangle meeting to "talk" in the sky, or a woman who walked through an arch in the sky into another world. The stories can be silly and fictional, but they should be rooted in a shape seen in the night sky images.

 **STUDENTS DO:** Tell each other stories inspired by shapes seen in the stars.

TEACHER SAY: Let's read an example of one such story. Turn to the page A Hunter in the Sky in your student book. Look at the image. Lines have been drawn to connect a group of stars that people have named. What does it look like to you?

TEACHER DO: Allow any answer to this question. The image is of the constellation Orion the Hunter, but students might see many other shapes and images even with the lines drawn. This is a time for creativity.

 **STUDENTS DO:** Share observations.

TEACHER SAY: This group of stars is called Orion. Over time, people in many different places on Earth began to recognize this group of stars. Let's read the story to find out what people see in this group of stars.

TEACHER DO: Choose a few students to each read one line of the story. Assist students with unfamiliar words. After reading the story, ask students to name the tool Orion used to hunt, and point out the bow and arrow that people see on the right of the picture. If students have trouble seeing the hunter pattern, point out the torso and skirt (the middle two shapes) as well, or have students draw a head and legs on the image. It is okay if students do not see a hunter in this image. It is enough for them to remember that over thousands of years, people have been naming and telling stories about shapes in the sky.

 **STUDENTS DO:** Read and discuss the story.



6. TEACHER SAY: People have been finding shapes in groups of stars and telling stories about them for thousands of years. There is a word for shapes that are recognized by scientists who study the sky and people around the world. This is our new word for today: CONSTELLATION. A constellation is a group of stars that people agree forms an imaginary shape. Let's repeat the word "constellation," and then we will add to our vocabulary song.

TEACHER DO: Guide students to sing the first lyrics with the same melody created for the vocabulary word "planetarium." Help them add two more lines for "constellation." Invite students to stand and sing the song with lyrics about the planetarium and constellation.

 **STUDENTS DO:** Sing lyrics to remember vocabulary words.

TEACHER DO: Write the word "constellation" on the board or on chart paper.



7.TEACHER SAY: **Now we know what a constellation is. Orion is one example of a constellation. The idea that Orion is a hunter with a bow and arrow and dogs is an example of the stories people have made up about the constellations. We will learn more about groups of stars seen in the night sky later in the chapter.**

8.Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER DO: Put students in small groups. Group them by table or group students sitting nearest to each other.

TEACHER SAY: Let's share what we have learned today. Share with your group what a constellation is and if you know of any other constellation names.

 **STUDENTS DO:** Summarize and share learning.

TEACHER DO: Walk around the classroom, making certain students are using the life skill of listening to others. After all students have had time to share, bring students back together using **Hands Up**.

TEACHER SAY: Thank you for working so well today. I saw very good cooperation as everyone shared their ideas.

TEACHER DO: Direct students to thank each other at the table and put supplies away.

Lesson 3 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Describe how the stars appear to rise and set each night. • Explain that rise and set times change slightly every day. • Practice mental subtraction strategies. • Read to understand the story of the relationship between the star Sirius and the annual flooding of the Nile.	• The Big Dog/Canis Major • Sirius	• Student book • Pencils • Crayons • Chart paper or board • Markers

PREPARATION
Write the words Science, Social Studies, Technology, Arts, Math, Reading, and Writing on large pieces of paper to post around the room.

COMPUTATIONAL THINKING:
Math
C.2.a. Apply a variety of problem-solving strategies based on concrete models or drawings, place value concepts, properties of operations, and/or the relationship between addition and subtraction and relate the strategy to a written method.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **I hope you were able to go outside again last night. Who would like to explain what you saw in the sky?**

TEACHER DO: Popcorn to three or four students.

TEACHER SAY: **We learned a new word in our last lesson: constellation. What is a constellation?**

TEACHER DO: Use Calling Sticks to choose a student to answer, then choose another student to lead the vocabulary song from the front of the room.

TEACHER SAY: **Let's sing our vocabulary song.**

 STUDENTS DO: Sing song.

TEACHER SAY: **Thank you. Let's think about our learning in the last lesson. What constellation did we learn about?**

TEACHER DO: Use Calling Sticks to choose students to answer.

TEACHER SAY: **Yes, we learned about Orion the Hunter. When we see shapes in the clouds, they often change even while we are watching. Is this the same for stars? Do the stars that make the pattern of Orion rearrange themselves to create a new pattern during the night?**

TEACHER DO: Use Calling Sticks or raised hands to choose students to answer. Prompt students to explain their ideas, even if they have given an incorrect answer, by asking, "Why do you think that?"



STUDENTS DO: Share ideas.

TEACHER SAY: We also learned in the last lesson that people long ago noticed they would see the same stars, in the same patterns, night after night. The stars are in a fixed order.

TEACHER DO: Draw a triangle of stars (or other simple image) on a piece of paper and connect the dots. Stand on one side of the room, showing students the image. As you explain the idea of stars rising and setting (or "appearing to move across the sky"), walk from one side of the room to the other with the image facing the students.

TEACHER SAY: Here is something else that people noticed long ago. If you find Orion, it looks like he moves across the sky during the night. Can anyone think of something else that looks like it moves across the sky in a predictable pattern over and over again?



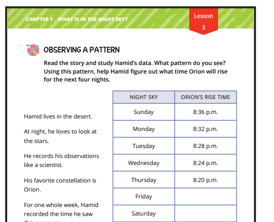
STUDENTS DO: Share ideas.

Note to Teacher: Students might initially name objects like birds or airplanes or even clouds. Emphasize the idea of "in a predictable pattern," and see if students can name the sun or the moon.

TEACHER SAY: Yes, our sun appears to move across the sky in a predictable pattern. What word do we use to describe the sun coming up in the morning?

TEACHER DO: Choose students to answer until the word "rise" is used.

TEACHER SAY: That is correct. We say the sun rises in the morning. And what do we call it when we see the sun disappear at night?



CHAPTER 1 WHAT IS IN THE NIGHT SKY? Lesson 3

OBSERVING A PATTERN

Read the story and study Hamid's data. What pattern do you see? Using this pattern, help Hamid figure out what time Orion will rise for the next four nights.

Hamid lives in the desert.

At night, he loves to look at the stars.

He records his observations like a scientist.

His favorite constellation is Orion.

For one whole week, Hamid recorded the time he saw Orion appear.

NIGHT SKY	ORION'S RISE TIME
Sunday	8:36 p.m.
Monday	8:32 p.m.
Tuesday	8:28 p.m.
Wednesday	8:24 p.m.
Thursday	8:20 p.m.
Friday	
Saturday	
Sunday	
Monday	

1. What pattern do you see in Hamid's data?

2. With every night that passes, the rise time of the stars is getting:

earlier later

96 PRIMARY 2

TEACHER DO: Choose students until the word "set" is used.

2. TEACHER SAY: Yes, we say the sun sets in the evening. Stars do just the same thing. They appear to rise at the beginning of the night and they appear to set at the end of the night. But here is a fun fact: stars do not rise at exactly the same time each night. The time they rise changes by a little bit each night. Let's see if we can detect a pattern. Open your student books to the page Observing a Pattern.

TEACHER DO: Use **Calling Sticks** to choose a student to read the directions, or read them aloud to students if more appropriate for student literacy levels.



STUDENTS DO: Read directions.

TEACHER SAY: First, let's read the story together.

TEACHER DO: Choose students to each read one line of the story, or read the story aloud to students. After reading the story, talk through the information given on the table. **Model** or review for students how to read a table (using the column titles to get oriented and reading across the rows for information) if needed. Ask students questions such as, "What time did Orion rise on the first day, Sunday?"

TEACHER SAY: Now, look at Hamid's data with a Shoulder Partner. See if you can find the pattern in the times he has recorded.



STUDENTS DO: Work with **Shoulder Partner** to find the pattern.

TEACHER DO: Allow students a few minutes to work, then use **Calling Sticks** or raised hands to choose one or more pairs to identify the pattern. When an answer is given, ask other students whether or not they agree.

TEACHER SAY: Wonderful work. The pattern Hamid observes is that stars rise four minutes earlier each night. This information will help us figure out when Orion will rise for the next four nights. Work with your Shoulder Partner to figure out: What time will the stars rise on Friday?



STUDENTS DO: Predict the next number in the pattern.

TEACHER DO: Support students as needed to complete the rest of the table. Review as needed:

- To find the next night's rise time, subtract four minutes from the previous night.
- When writing times, format the time as: hours : minutes.
- Subtraction is used instead of addition because time is earlier, not later.
- Since the rise time is four MINUTES earlier, students only need to subtract four from the minutes, not the hours.
- Where to enter the predicted times on the table.

Note to Teacher: This math task is intended to provide applied practice for mentally subtracting within 20. If students struggle with using only mental strategies, review other strategies, place value, and borrowing as needed.

TEACHER SAY: Let's check our answers together. Hamid sees Orion at 8:20 on Thursday night. That information is given to us in the table. What time should he look for Orion on Friday?

 **STUDENTS DO:** Students respond.

TEACHER DO: Review the rest of the answers in the table. Use **Calling Sticks** or call on students with hands raised. After each answer, ask students: How do you know?

 **STUDENTS DO:** Review and justify answers.

Note to Teacher: This math task can be further extended to include the use of patterns to look for efficiencies in problem solving. This is a form of computational thinking. Engage your students in a conversation around the kinds of patterns they see in this problem and how they might use patterns to solve the problem in different ways. Students may also want to draw their strategies using counters or even showing the movement of the hands on a clock. Encourage all thought processes and ask students to comment on others' ideas.

TEACHER SAY: Great job using math to learn about the night sky. Thank you for working together with your Shoulder Partner. Let's write about what we learned to help us remember it. Take a few minutes to answer the two questions at the bottom of the page on your own.

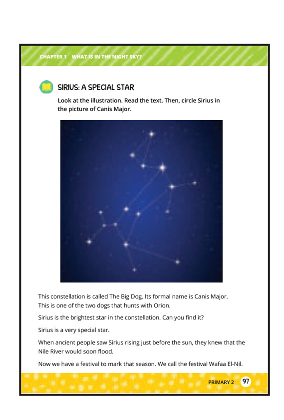
 **STUDENTS DO:** Answer the questions to summarize the data.

TEACHER DO: When the class has finished answering the questions, bring their attention back with the strategy **Hands Up**.

TEACHER SAY: As time goes on, do stars appear to rise earlier or later each night?

Note to Teacher: The repetition of this question/idea is intentional to prepare for the next idea.

 **STUDENTS DO:** Respond.


CHAPTER 1 WHAT IS IN THE NIGHT SKY?

SIRIUS: A SPECIAL STAR

Look at the illustration. Read the text. Then, circle Sirius in the picture of Canis Major.

This constellation is called The Big Dog. Its formal name is Canis Major. This is one of the two dogs that hunts with Orion.

Sirius is the brightest star in the constellation. Can you find it?

Sirius is a very special star.

When ancient people saw Sirius rising just before the sun, they knew that the Nile River would soon flood.

Now we have a festival to mark that season. We call the festival Wafaa El-Nil.

PRIMARY 2 97

3. TEACHER SAY: Very good. You have learned that the stars appear to rise earlier and earlier each night. Over many years, people observed and recorded this pattern. The pattern is so predictable that people could use the stars as a kind of calendar. Let's learn about one specific star. Turn to the page Sirius: A Special Star and look at the illustration. Do you see any shapes in the stars? Point and share with your Shoulder Partner.

 **STUDENTS DO:** Share ideas.

Note to Teacher: As before, it is not essential for students to see the "dog" in the star group. Students may notice the triangle at the top and other triangles (that are not finished with lines in the image) where the legs and tail of the dog would be. This reinforces the wonder of seeing patterns in the stars.

TEACHER SAY: Please read to yourself as I read aloud about the star called Sirius.

TEACHER DO: Read the story in the student book aloud.

TEACHER SAY: Circle the star you think is Sirius in the picture above the story.

 **STUDENTS DO:** Circle the brightest star in the constellation.

TEACHER DO: Walk around to make sure that the students are able to find Sirius in the picture of the constellation. Lead a discussion about the story using **Calling Sticks** or raised hands to choose students to answer questions such as those suggested below. Pause after each question and encourage participation from all students by using a variety of strategies.

4.**TEACHER SAY:** **Let's discuss what we learned in the story.**
- **In what constellation is the star called Sirius found?**
- **What is special about the star called Sirius?**

Now, I have a thinking question for you. Based on what we have learned today, do you think Sirius appears to rise at the same time every night? Thumbs Up if you think yes.



STUDENTS DO: Answer using **Thumbs Up** or not. (Correct answer is no.)

TEACHER SAY: **Very good. You have learned that the stars appear to rise at a different time each night. You have also learned that Sirius is a very special star. When it rises at a certain time, it marks the season when the Nile begins to flood. The stars have been very important throughout the history of humans.**

5.Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: **Turn to your tablemates to share what we have learned today. The tallest person will lead the group discussion. The group leader will make certain everyone has time to share.**



STUDENTS DO: Choose leader.

TEACHER SAY: **Based on what you learned today, do you think we could use stars to make a calendar?**



STUDENTS DO: Share ideas in table groups.

TEACHER DO: Walk around the classroom, making certain students are using the life skills of working cooperatively and listening to others. After all students have had time to share, bring students back together by using the strategy **Hands Up**. If time allows and students are interested, create lyrics for the vocabulary song about Sirius and Orion the Hunter.

TEACHER SAY: **Thank you for working so well today. I saw very good cooperation as everyone shared their ideas. Now you know to look four minutes earlier for Orion the Hunter in the sky tonight. Maybe you can tell your family why Sirius is a special star.**

Lesson 4 Overview

LEARNING OUTCOMES

Students will:
- Hypothesize that the sun is a star and begin an investigation into this hypothesis.
- Compare observable properties of the sun and the stars.

KEY VOCABULARY

- Shadow
- Surface

MATERIALS

- Student book
- Pencils
- Crayons
- Chart paper or board

PREPARATION

The activity in this lesson is designed to be done outside on a sunny day.

LIFE SKILLS

Learn to Be

Communication:
- Good listening.
- Self-expression.
- Reading, writing, non-verbal communication skills.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen. Encourage students to lead this routine as they become more comfortable.

TEACHER SAY: **In our last lesson, we talked about the stars we see at night. Please raise your hand and tell us about the stars you saw last night.**

TEACHER DO: Call on two or three students.

 STUDENTS DO: Respond.

TEACHER SAY: **Thank you for sharing. Please raise your hand if you remember what we discussed about how the stars appear to rise in the evenings.**

TEACHER DO: Choose several students to share what they remember.

 STUDENTS DO: Respond.

TEACHER SAY: **We have been talking about the stars appearing to rise and set, and I noticed that the sun also appears to rise and set. Thumbs Up if you have noticed that the sun appears to rise and set, too.**

 STUDENTS DO: **Thumbs Up** or not.

2. TEACHER SAY: **I wonder if our sun is like the stars we see at night. What do you think?**

TEACHER DO: Use **Calling Sticks** to choose three students to share their ideas.

 STUDENTS DO: Respond.

TEACHER SAY: **Those are very good ideas. We see the stars appear to rise in the evening. Raise**

your hand if you know when the sun rises.

TEACHER DO: Choose students to respond.

 STUDENTS DO: Respond.

TEACHER SAY: **I can see you have been thinking about the stars and the sun. I have been thinking too. In Primary 1 you learned about shadows. I think shadows might help us understand our sun and stars. Who can share what you know about shadows?**

 STUDENTS DO: Share what was learned in Primary 1.

Note to Teacher: If your students did not experience the Education 2.0 Primary 1 Curriculum, use this time to check prior knowledge and experiences. You may find that the students need more time to explore shadows if they have not had formal experiences, but most students would have had some experience with shadows. The activity that follows will strengthen their understanding.

TEACHER SAY: **What do you think is needed to make a shadow? Talk with the others at your table. Look around the room. Maybe you see shadows in the room. Decide as a team what you think is needed to make a shadow.**

 STUDENTS DO: Experiment with shadows and share ideas with their groups.

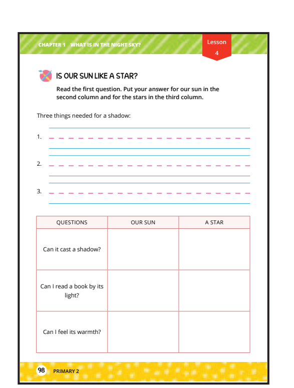
TEACHER DO: As students are exploring shadows in the room, pose questions as needed to guide thinking. Questions might include:

TEACHER SAY:
- **Why isn't the shadow on the other side?**
- **Is the shadow always on this side? Why?**
- **What is causing the shadow to appear?**
- **Where is the light source?**
- **Can I move to where there is no shadow? How is it different?**



STUDENTS DO: Formulate or prove own understanding of shadows.

TEACHER SAY: **I have heard some good discussion. Let's begin to share our ideas. Think about our question: What is needed to make a shadow? Be sure to give evidence for your answer. You can use a shadow you have seen in the classroom to help explain.**



CHAPTER 1 WHAT IS IN THE NIGHT SKY? Lesson 4

IS OUR SUN LIKE A STAR?

Read the first question. Put your answer for our sun in the second column and for the stars in the third column.

Three things needed for a shadow:

1.

2.

3.

QUESTIONS	OUR SUN	A STAR
Can it cast a shadow?		
Can I read a book by its light?		
Can I feel its warmth?		

98 PRIMARY 2

TEACHER DO: Choose as many students as needed to explain thinking with evidence.

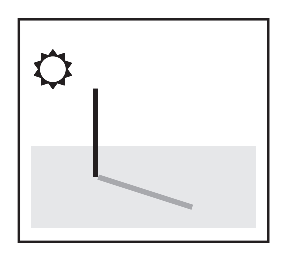
 STUDENTS DO: Respond with evidence.

TEACHER SAY: **Thank you. Those are very good ideas. A shadow is the dark space, where the path of the light is blocked by an object. We need three things to make a shadow: a light source, an object, and a surface on the side opposite the light source. Knowing about shadows will be important for our learning today. Let's take time to record what we know. Please open your student book to the page called Is Our Sun Like a Star?**

 READ ALOUD: **Read the first question. Put your answer for our sun in the second column and for the stars in the third column.**

 STUDENTS DO: Look at the page to understand directions.

TEACHER SAY: **On the first three lines, we are to write three things needed for a shadow. Once again, what are the three things needed for a shadow?**



TEACHER DO: Draw on the board the three things and label them. It should be as simple as a sun, a pole, and the ground.

 STUDENTS DO: Write the three things in their student book next to the label.

TEACHER SAY: **Where would the shadow fall in this picture?**

TEACHER DO: Use **Calling Sticks** to choose students. When the response "along the ground on the side opposite the light source" is given, draw the shadow into the picture.

TEACHER SAY: Very good. Now we agree about what a shadow is and how to draw it. We have learned that the stars and sun appear to rise and set, just at different times. Let's begin to answer the questions in our student book. We will use our own observations to answer the questions. Read the first question to yourselves.

 **STUDENTS DO:** Read the first question to themselves.

TEACHER SAY: We will make some observations to answer this question. Then, in the first box next to the question labeled our sun, you will decide if our sun can cast a shadow. If we think it can, we will write "yes" in the box and draw a picture to illustrate the sun casting a shadow. For now, let's close our student books.

 **STUDENTS DO:** Close student books.

TEACHER SAY: Before we make our observations, it is important to remember that you should never look at the sun. Do you know why not?

TEACHER DO: Choose students to answer. Guide the response toward: because it could permanently damage your eyes.

 **STUDENTS DO:** Respond.

TEACHER SAY: Now we will go outside to make our observations. Please bring your pencil and your student book.

TEACHER DO: Organize the students to get ready to go outside.

Note to Teacher: If the school has a flagpole, take them there to see a shadow. If not, put them together with a friend, and they can take turns seeing the shadow cast by the friend. Be sure to reinforce that they should never look directly at the sun.

TEACHER SAY: Please observe carefully. Is the sun casting a shadow? Thumbs Up if you think our sun can cast a shadow.

 **STUDENTS DO: Thumbs Up** if they agree.

TEACHER SAY: Yes, we often see shadows cast by the sun. Please write "yes" in the first box and draw a picture of the sun casting a shadow. Label the three items you need to make a shadow in your drawing.

TEACHER DO: Walk around to help students label their drawings and to show that a shadow is cast on the side of the object away from the sun.

 **STUDENTS DO:** Draw pictures depicting the sun casting a shadow.

TEACHER SAY: The next question is: Can I read a book by its light?

TEACHER DO: Hold up a book or a piece of paper and appear to be reading it.

TEACHER SAY: Try it with your student book, by facing away from the sun. Remember, never look directly at the sun.

 **STUDENTS DO:** Hold up student books so they can read them.

TEACHER SAY: Please discuss with your Shoulder Partner, then fill in the box for Our Sun to answer the question: Can I read a book by its light?

TEACHER DO: Give students sufficient time for discussion and to draw the picture depicting them reading a book by the sun's light.

 **STUDENTS DO:** Discuss with **Shoulder Partner** and make drawings.

TEACHER SAY: You are doing a very good job with our observations. The next question is: Can I feel its warmth?

TEACHER DO: Face away from the sun and hold up arms briefly to **model** feeling the sun on the back.

TEACHER SAY: Please face away from the sun. Remember, never look directly at the sun.

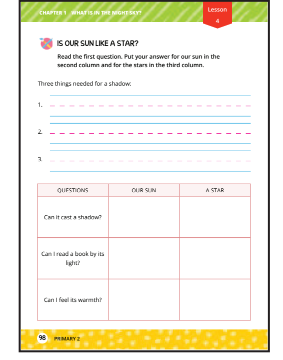
 **STUDENTS DO:** Turn backs to the sun.

TEACHER SAY: Please discuss with your partner: Can you feel the sun's warmth? Then fill in the box for Our Sun.

TEACHER DO: Give students sufficient time for discussion and to draw the picture depicting them feeling the sun's warmth.

 **STUDENTS DO:** Discuss with partners and make drawings.

TEACHER DO: When the students have finished drawing, organize them and return to the classroom.


CHAPTER 1 WHAT IS IN THE NIGHT SKY? Lesson 4

IS OUR SUN LIKE A STAR?

Read the first question. Put your answer for our sun in the second column and for the stars in the third column.

Three things needed for a shadow:

1.

2.

3.

QUESTIONS	OUR SUN	A STAR
Can it cast a shadow?		
Can I read a book by its light?		
Can I feel its warmth?		

98 PRIMARY 2

TEACHER SAY: Thank you remembering our expected behaviors outside and for making such careful observations. Let's discuss some of our results. Please open your student book to the page Is Our Sun like a Star? Did you see our sun cast a shadow? Let's use Popcorn to hear what you saw.

TEACHER DO: Call on the first student to start the **Popcorn** for three responses.

 **STUDENTS DO:** Respond, then **Popcorn** to another student.

TEACHER SAY: Thank you for sharing. Indeed, I have seen the sun cast a shadow, because its light is very bright. I wonder if a star can cast a shadow. Please look in your student book at the box for "A Star."

 **STUDENTS DO:** Find the box labeled "A Star" for the first question.

TEACHER SAY: Please discuss with your Shoulder Partner whether a star in the night sky can cast a shadow.



 **STUDENTS DO:** Discuss with **Shoulder Partner**.

TEACHER SAY: If you are not sure whether a single star can cast a shadow, you may try the observation at home tonight. You may leave the box for "A Star" blank today and fill it in tomorrow. Let's look at the second question. Were you able to read a book by the light of the sun?

TEACHER DO: Use **Calling Sticks** to gather a few responses.

TEACHER SAY: Thank you for sharing your observations. I can read a book by the sun's light. It is very bright. What do you think about the stars? Can you read a book by the light of one star in the night sky? Discuss with your Shoulder Partner.

 **STUDENTS DO:** Discuss with **Shoulder Partner**.

TEACHER SAY: What have you decided? Can you read a book by the light of one star?

TEACHER DO: Call on the first student to start the **Popcorn** for three responses.

 **STUDENTS DO:** Respond, then **Popcorn** to another student.

TEACHER SAY: Hmmm, I cannot read a book by starlight. The light from stars is too dim for

me to read by. Let's finish up with the third question. Were you able to feel the warmth of the sun? Let's use Popcorn to find out what you felt.

TEACHER DO: Call on the first student to start the **Popcorn** for three responses.

 **STUDENTS DO:** Respond, then **Popcorn** to another student.

TEACHER SAY: Thank you for sharing. I can feel the sun's warmth when I go outside on a sunny day. What do you think about the stars? Can you feel the warmth from one star in the night sky? Please discuss with your Shoulder Partner.

 **STUDENTS DO:** Discuss with **Shoulder Partner**.

TEACHER SAY: What have you decided? Can you feel warmth from the light of one star?

TEACHER DO: Call on three students using **Calling Sticks**.

TEACHER SAY: Thank you for being so thoughtful. I have not felt the warmth of one star in the night sky. You could try to find out for yourself when you are at home tonight.

3. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER DO: Put students in small groups. Group them by table or group students sitting nearest to each other.

TEACHER SAY: Please choose a table group leader to lead the discussion.

 **STUDNETS DO:** Choose a table group leader.

TEACHER SAY: Table group leaders, please make sure everyone has the chance to share their ideas. Let's share what we have learned today. Please discuss how the sun compares with a star.

TEACHER DO: Allow up to 10 minutes for this discussion. Walk around the room, asking questions of the students about the observations they made today.

 **STUDENTS DO:** Discuss today's activities.

TEACHER SAY: Thank you for working so hard today as we compared our sun to the stars. We wondered if our sun is like the stars we see at night. I wonder if there is something that we have not thought about. In our next lesson, we will try to find out more about the sun and its relationship to the stars.

Lesson 5 Overview

LEARNING OUTCOMES

Students will:

- Demonstrate that objects appear smaller when they are farther away.
- Use a model to compare relative size.

KEY VOCABULARY

- Experiment
- Observations

MATERIALS

- Student book
- Pencils
- Crayons
- Teacher's Object (see below)

PREPARATION

Have on hand a globe (preferred) or a map of the world.

An object that students can easily view from their seats object is required for the first experiment. It can be a poster on the wall or a lamp in the front of the room. It should be at least 50 cm tall, but the larger the better. In this guide, the object will be referred to as Teacher's Object.

LIFE SKILLS

Learn to Live Together	Learn to Know
Communication: • Good listening.	Critical Thinking: • Define relationships between different objects.



Learn (90 minutes)

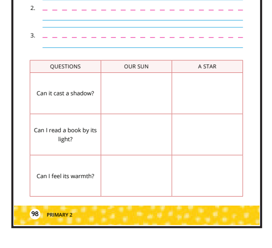
Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **In our last lesson, we wondered if the sun was like the stars we see at night. We began to conduct experiments to compare the sun to the stars. Did anyone look at the stars last night to compare them with the sun? Can you tell us what you saw?**

TEACHER DO: Choose students to share observations.

 STUDENTS DO: Share observations.



CHAPTER 1 WHAT IS IN THE NIGHT SKY? Lesson 4

IS OUR SUN LIKE A STAR?

Read the first question. Put your answer for our sun in the second column and for the stars in the third column.

Three things needed for a shadow:

1.

2.

3.

QUESTIONS	OUR SUN	A STAR
Can it cast a shadow?		
Can I read a book by its light?		
Can I feel its warmth?		

98 PRIMARY 2

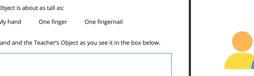
TEACHER SAY: **Let's take time to finish the page we started yesterday, Is Our Sun like a Star? Please turn to the correct page and complete the sections about the stars. Share your observations with your Shoulder Partner.**

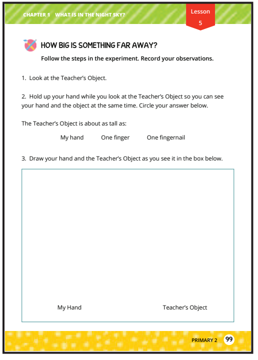
Note to Teacher: If students did not see the stars, guide the discussion so all students will be able to respond in the student book. Review the answers as needed once all students have completed the written observations.

 STUDENTS DO: Complete written work.

2. TEACHER SAY: **We are going to do some experiments to help us understand why the sun looks different from the other stars. Who can explain what an EXPERIMENT is?**

 STUDENTS DO: Offer ideas and experiences.





CHAPTER 1 WHAT IS IN THE NIGHT SKY? Lesson 5

HOW BIG IS SOMETHING FAR AWAY?

Follow the steps in the experiment. Record your observations.

1. Look at the Teacher's Object.

2. Hold up your hand while you look at the Teacher's Object so you can see your hand and the object at the same time. Circle your answer below.

The Teacher's Object is about as tall as:

My hand One finger One fingernail

3. Draw your hand and the Teacher's Object as you see it in the box below.

My Hand Teacher's Object

PRIMARY 2 99

TEACHER SAY: **When we do an experiment, we are testing an idea by making careful observations. In our experiment, we will model using objects that are much smaller than stars and the sun. We will use what we learn to better understand the stars. Let's open our student books to How Big Is Something Far Away?**

Note to Teacher: The Teacher's Object (see notes in Preparation) should be easily visible to all students.

TEACHER DO: Walk to the Teacher's Object as students open their student books.

TEACHER SAY: We will follow each of the steps together. The first step is to look at my object. If you cannot see my object, please raise your hand.

TEACHER DO: Adjust the location of the Teacher's Object or students as needed.

TEACHER SAY: The second step is to hold up your hand while you are looking at my object. Look at both at the same time, like this.

TEACHER DO: Walk to the other side of the room and **Model** looking at the Teacher's Object and your hand at the same time. (The intention is to compare the size of the Teacher's Object to the hand.)



 **STUDENTS DO:** Look at Teacher's Object and their hands at the same time.

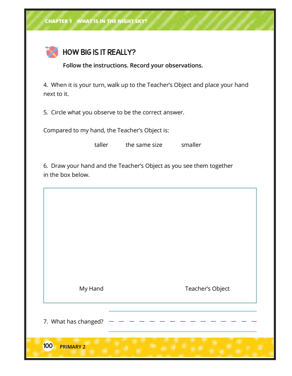
TEACHER SAY: Observe how tall my object looks compared to your hand. Does it look the same size as your hand? Does it look smaller? As big as a finger? Or maybe even smaller still, the size of your fingernail? Please circle your answer to question number 2 in your student book.

TEACHER DO: Walk around the classroom, helping students with the process of comparing the apparent size of the Teacher's Object to the size of their hands.

 **STUDENTS DO:** Choose and circle an answer to question 2.

TEACHER SAY: Very good. Now please draw what you saw in the box in your student book. You should draw your hand and draw my object next to it, as big as it looks compared to your hand. You may discuss with your Shoulder Partner but be sure to make your own drawing.

TEACHER DO: You may want to **Model** drawing your hand compared to the object on the board. Walk around the classroom, helping students understand what to draw.



CHAPTER 1 WHAT IS IN THE NIGHT SKY?

HOW BIG IS IT REALLY?

Follow the instructions. Record your observations.

4. When it is your turn, walk up to the Teacher's Object and place your hand next to it.

5. Circle what you observe to be the correct answer.

Compared to my hand, the Teacher's Object is:

taller the same size smaller

6. Draw your hand and the Teacher's Object as you see them together in the box below.

My Hand Teacher's Object

7. What has changed?

100 PRIMARY 2

 **STUDENTS DO:** Draw in student books and discuss with **Shoulder Partner**.

TEACHER SAY: You are doing a very good job of recording your observations from the experiment. Now we will do the second part of the experiment. Please open your student book to the next page, How Big Is It Really? Please read instruction number 4 to yourself.

 **STUDENTS DO:** Read the instruction.

TEACHER DO: Choose a student to restate the directions in his or her own words.

TEACHER SAY: We are going to walk quietly, single file, in a circle around the room so that everyone may walk past my object. When you get to my object, stop and hold up your hand like this.

TEACHER DO: Model holding up hand very close to the Teacher's Object.

Note to Teacher: If it is not feasible for students to move around the object, you may choose to carry the object around to student tables or to hold your own hand next to the object and then have students draw your hand.

TEACHER SAY: Observe the size of your hand compared to the size of my object. Look carefully, because you will need to remember this to answer the questions in your student book. When you return to your seat, please answer the questions in your student book. Ready? Everyone, please stand up quietly. We will start with students in the front of the room.

TEACHER DO: As students walk past the Teacher's Object, remind them of the procedure (to hold up their hand next to it and compare the sizes).

 **STUDENTS DO:** Walk past the Teacher's Object and compare its size to their hands, then

return to their seats.

TEACHER SAY: **When you return to your seats, please answer questions 5 and 6 in your student book. You may discuss with your Shoulder Partner but be sure to make your own drawing.**

TEACHER DO: Allow a few minutes to answer questions 5 and 6 and discuss with a **Shoulder Partner**. Regain students' attention with **Hands Up**. Facilitate discussion using the questions suggested below as a starting point. Use **Calling Sticks** or other strategies for choosing students to share.

TEACHER SAY:

- **How do the two drawings look different?**
- **Did the object change size?**
- **Did your hand change size?**
- **Why do the two drawings look so different?**
- **If the size of my object is not really changing, I wonder what is changing. Do you have ideas?**

TEACHER DO: Adjust the conversation and allow time to discuss student questions as needed.

TEACHER SAY: **Your ideas are very good. The only thing that changed is how far away you were from my object. When you are far away from my object, it looks small. When you are close to my object, it looks large. What is affecting how big my object appears to be?**

TEACHER DO: Choose students to answer. Encourage discussion. Guide discussion toward "how far away it is," or "distance."

3. TEACHER SAY: **You have learned something important: How far away something is affects how big it appears to be. Let's repeat that together.**

 STUDENTS DO: Repeat the learned fact.

TEACHER SAY: **Earlier, we discussed that our sun is a star, but it looks different from other stars. Our sun looks so much bigger than other stars. Thinking about the experiment we just did, why do you think our sun looks so much bigger than other stars?**

 STUDENTS DO: Respond with ideas.

TEACHER SAY: **That is very good. Our sun is a lot closer to us than the other stars. You have recorded good observations today with our experiment. And you have applied your observations to our very own star that we call our sun. You have learned a lot today.**

4. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: **Please turn to your table groups and choose a leader for the discussion. Think about how you can share this experiment with your family at home. What object would they look at? Where could you set up the object? Take a few moments to discuss this idea. Be sure everyone gets a chance to talk.**

 STUDENTS DO: Share ideas.



TEACHER DO: Walk around the classroom, making certain students are using the life skill of listening to others. After all students have had time to share, bring students back together by using strategy **Hands Up**.

TEACHER SAY: **Thank you for working so well today. I saw very good cooperation as everyone shared their ideas. Now you can be a teacher and lead the experiment at home with your family.**

TEACHER DO: Direct students to thank each other in the group and put supplies away.

Lesson 6 Overview

LEARNING OUTCOMES

Students will:
- Explain that light sources appear dimmer when they are farther away.
- Explain that the sun appears different than the other stars because it is closer to Earth.
- Recognize galaxies as being made up of stars.
- Identify the telescope as a tool for learning about the deep sky.

PREPARATION

Light sources, such as flashlights, preferably several of them, are required for the experiment. Consider making stations around the room, each with one flashlight. If multiple flashlights are not available, adjust this experiment to be a teacher-led demonstration

KEY VOCABULARY

- Galaxy
- Telescope
- Astronomer

LIFE SKILLS

Learn to Work

Collaboration:
- Review individual behaviors with the team.
- Respect for other opinions.

MATERIALS

- Student book
- Pencils
- Crayons
- Piece of paper (one per table group)
- Flashlight (one per table group, if possible)



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **It has been a while since we sang our vocabulary song. Who would like to lead us in our song?**

 STUDENTS DO: Sing song.

TEACHER DO: Consider adding any lyrics that will help students with vocabulary.

2. TEACHER SAY: **In our last class, we learned why our sun looks so much bigger than the other stars. Who can explain why to the class?**

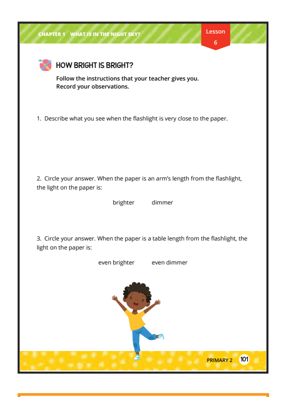
TEACHER DO: **Popcorn** answers until the concept of relative distance is fully developed.

 STUDENTS DO: Share ideas.

TEACHER SAY: **Thank you for sharing. Our sun looks bigger than the other stars because it is much closer to us. How else is our sun different from the other stars?**

TEACHER DO: **Popcorn** answers until four or five students have shared.

TEACHER SAY: **Another way our sun is different from the other stars is that it appears to be much brighter. Today we are going to do an experiment to discover why our sun seems to be brighter than the other stars. Remember when we do an experiment, we are testing an idea by making careful observations.**


CHAPTER 1 WHAT IS IN THE NIGHT SKY?
Lesson 6

HOW BRIGHT IS BRIGHT?

Follow the instructions that your teacher gives you.
Record your observations.

1. Describe what you see when the flashlight is very close to the paper.

2. Circle your answer. When the paper is an arm's length from the flashlight, the light on the paper is:

brighter dimmer

3. Circle your answer. When the paper is a table length from the flashlight, the light on the paper is:

even brighter even dimmer

PRIMARY 2 101



TEACHER DO: Divide students into groups or note that they will be working with their table groups depending on the number of supplies. Provide each table group with a piece of paper and distribute flashlights.

TEACHER SAY: **Please open your student books to the page called How Bright Is Bright? As a group, choose one student who will hold the flashlight and another student to hold the paper. You will take turns doing these jobs.**

TEACHER DO: Give students a moment to choose who will hold the flashlight and the paper first.

TEACHER SAY: **If you are not holding the flashlight or the paper, please move around behind the person with the flashlight, so that you can look over their shoulder.**



STUDENTS DO: Move into position.

TEACHER SAY: **When we get started, you will hold the flashlight like this. Practice, but do not turn the flashlight on yet.**

TEACHER DO: Hold the flashlight about 10 cm above and parallel to the table top.

TEACHER SAY: **The student with the paper will hold it very close to the flashlight, about one hand width away, like this.**

TEACHER DO: With your other hand, hold the paper about one hand width away from the flash-light. Demonstrate how to measure "a hand width away."

TEACHER SAY: **Please hold the flashlight and paper in their correct positions. You may turn on the flashlight.**



STUDENTS DO: Arrange the flashlight and paper in the correct positions, then turn on the flashlight when instructed to do so.

TEACHER SAY: **Observe the light shining on the paper. Think about what you see. Do not say anything. Just look at the paper and think silently about what you see.**

TEACHER DO: Give students about 10 seconds to observe the light on the paper.

TEACHER SAY: **Very good. If you are holding the flashlight, please turn it off. If you are holding the paper, you may put it down on the table. Record what you saw as the answer to question number 1 in your student book.**



STUDENTS DO: Record observations.

Note to Teacher: For the next step, hold the paper one arm's length from the flashlight. During the third step, hold the paper a table length from the flashlight. Repeat the process above for each new distance, cueing students to turn on the flashlights, silently observe, and record observations.

TEACHER SAY: **Thank you for doing such a good job with the experiment. Now please take your regular seats. Please talk with your Shoulder Partner and discuss your observations from the experiment.**

TEACHER DO: Give students two minutes to compare observations.



STUDENTS DO: Return to seats and discuss observations with a **Shoulder Partner**.

TEACHER DO: Regain students' attention with **Hands Up**.

TEACHER SAY: **Please describe what the light looked like on the paper when the flashlight was very close, just a hand-width away.**

TEACHER DO: Choose students to answer using **Calling Sticks**. Then repeat the question for the other two distances.

 **STUDENTS DO:** Share observations.

TEACHER SAY: Thumbs Up if the light appeared to get dimmer when the paper was moved an arm's length away.

 **STUDENTS DO:** Put **Thumbs Up** if they think the light appeared to get dimmer.

TEACHER DO: Facilitate discussion based on or extending from the suggested questions below. Alternate strategies for choosing students to answer as needed and allow for student-to-student discussion as appropriate.

TEACHER SAY:

- **What do you think happened to make the light appear dimmer?**
- **Do you think the flashlight got dimmer or did it just look that way on the paper?**
- **What happened when we moved the paper a table length away?**
- **Was there a pattern to how the light appeared to change on the paper?**

 **STUDENTS DO:** Share ideas.

TEACHER SAY: We see that as the paper gets farther from the flashlight, the light on the paper looks dimmer, even though the light coming out of the flashlight has not changed. Now, remember we were talking about how the sun is different from the other stars. Do the stars appear brighter than our sun or dimmer?

 **STUDENTS DO:** Share ideas (dimmer).

TEACHER SAY: Yes, the stars appear dimmer than our sun. Think about the experiment we just did. Which do you think is farther away, the stars or our sun?

 **STUDENTS DO:** Share ideas (the stars).

TEACHER SAY: Very good. Yes, the stars are much farther away from us than our sun. That is why they are so much dimmer than our sun. Some stars are so far away we cannot see them with our eyes. I wonder what else might be in the sky at night. What do you think might be in the sky that we cannot see with our eyes?

TEACHER DO: Choose students to answer using **Calling Sticks**.



CHAPTER 1 WHAT IS IN THE NIGHT SKY?

DEEP SKY

Look at the picture. Read the text.

This is a picture of space.

The shapes and dots you see in the picture are not stars. They are galaxies.

Galaxies are where stars exist. Each galaxy contains many, many stars.

102 PRIMARY 2

3. TEACHER SAY: Thank you for sharing your ideas. Let's turn to the next page in your student book, labeled Deep Sky. Turn to your Shoulder Partner and discuss what you see in this picture. We will share with the class in two minutes.

 **STUDENTS DO:** Discuss picture with **Shoulder Partner**.

TEACHER SAY: What do you see in the picture?

TEACHER DO: **Popcorn** to choose three students to answer the question before continuing.

 **STUDENTS DO:** Share observations.

4. TEACHER SAY: The shapes in the picture are not individual stars. They are galaxies.



TEACHER DO: Write the word "galaxy" on the board or chart paper.



CHAPTER 1 WHAT IS IN THE NIGHT SKY?

SPACE

Look at the pictures. Read the text.

This is a picture of a galaxy. All of the light you see comes from many, many stars. Our sun is in a galaxy like this one.

This picture of a galaxy was taken with a tool called a telescope. A telescope helps us see very dim and far away objects in the sky.

PRIMARY 2 103

TEACHER SAY: A galaxy is made up of many, many stars. Let's look at the next page in your student book, called Space. The first picture is a galaxy. Please take a moment to look at the picture and read the text below it.

 **STUDENTS DO:** Look at the picture of a galaxy. Read the text below the picture.

TEACHER SAY: What do you see in this picture?

TEACHER DO: Use **Calling Sticks** to choose three students to answer the question before

continuing. Prompt students to notice the darkness around the galaxy and that the galaxy gives off light.

5. TEACHER SAY: Very good. The light coming from the galaxy is made up of stars. Is this what you see when you look at the night sky?

 **STUDENTS DO:** Respond with observations.

TEACHER SAY: We cannot see most galaxies because they are too far away, and our eyes cannot see things that dim. You have learned that people make tools, or technology, to help us. Tools help extend what we can do on our own. A very long time ago, people wanted to see dimmer objects in the sky. Someone invented a special tool. Does anyone know what that technology is?

TEACHER DO: If any students raise a hand, allow them to answer.

Note to Teacher: If nobody knows what a telescope is, that is fine. This is simply an opportunity for students with specific interest in space to share what they know.

TEACHER SAY: We call the technology that helps us see dim objects in the sky a TELESCOPE.

TEACHER DO: Write the word "telescope" on the board/chart paper.

TEACHER SAY: This beautiful picture of the galaxy was taken with a telescope. Raise your hand if you have seen a telescope in real life.

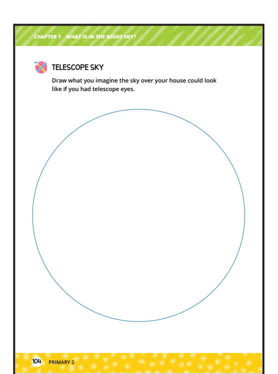
TEACHER DO: If any students raise a hand, allow them to share the experience.

Note to Teacher: You may also choose to add "telescope" to the vocabulary song.

TEACHER SAY: Look at the picture of the telescope on this page. We use telescopes to see very dim objects in the sky. We can even take pictures with telescopes, like the pictures of the galaxies. Telescopes are tools that help us understand the deep sky. Does anyone know what a scientist who studies the sky is called?

 **STUDENTS DO:** Share ideas.

TEACHER SAY: An ASTRONOMER helps us understand the night sky and the galaxies far away. The telescope is one tool that an astronomer uses. Think for a moment about what the sky over your house might look like if you had eyes that could see like a telescope. Let's use Think Time.



 **STUDENTS DO:** Think about the question.

6. TEACHER SAY: Turn to the next page, Telescope Sky. We love using our imaginations. Use your imagination to draw what the sky over your house might look like if you had telescope eyes.

 **STUDENTS DO:** Use imagination to complete a drawing.

TEACHER DO: If students finish early, encourage them to look for other pictures of the deep sky, using available books or technology.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: We have been learning a lot about what is in the night sky. To conclude today's lesson, please turn to your table group. Choose a leader for the discussion, someone who did not hold a flashlight or a piece of paper earlier.

 **STUDENTS DO:** Choose a discussion leader.

TEACHER SAY: Please discuss what you have learned about what we can and cannot see in the night sky. How do we use tools to see more than our eyes can see?

STUDENTS DO: Share ideas about space.

TEACHER DO: Walk around the classroom, making certain students are using the life skill of listening to others. After all students have had time to share, bring students back together by using the strategy **Hands Up**.

TEACHER SAY: **Your final question for today is: What do you wonder about the night sky?**

STUDENTS DO: Discuss questions.

TEACHER SAY: **When you go home tonight, you can talk to your family about galaxies, where all of the stars live.**

Lesson 7 Overview

LEARNING OUTCOMES

Students will:
- Write a story with a beginning, middle, and end.
- Use information learned to write a creative story.
- Use illustration to support writing.

KEY VOCABULARY

- Constellation
- Illustration

MATERIALS

- Student book
- Crayons
- Pencils

LIFE SKILLS

Learn to Know

Critical Thinking:
- Differentiate between reality and imagination.

Learn to Be

Communication:
- Good listening.
- Self-expression.
- Reading, writing, non-verbal communication skills.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Did anyone look at the night sky last night? What did you see?**

 STUDENTS DO: Share observations.

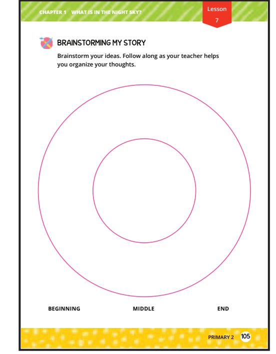
TEACHER SAY: **I am glad you are still looking at the night sky. Let's review our last lesson. I will use Calling Sticks to choose three students to share what you learned about our deep sky.**

 STUDENTS DO: Share to review learning.

TEACHER SAY: **You have learned so much about the deep sky and what we see in our night sky. Who can remind us about constellations? How are we able to find them in the sky?**

TEACHER DO: Choose students to respond using **Calling Sticks**. This will become a review of finding patterns in the sky.

2. TEACHER SAY: **Today we will use our imaginations and what we have learned. Remember the story about Orion the Hunter? People have been making up stories about patterns in the sky for a very long time. Today, everyone will write their own story. You can create your own story about the stars. You can create an original constellation. Or you can write a story about the deep sky. Take some Think Time. Use your imagination and decide what story you will write.**



STUDENTS DO: Think about what to write.

TEACHER SAY: **Turn to the next page in your student book, Brainstorming My Story. Read the directions along with me.**

 READ ALOUD: **Brainstorm your ideas. Follow along as your teacher helps you organize your thoughts.**

TEACHER SAY: **First, let's decide what your story will be about. In the small circle in the center, write two or three words that tell what your story is about.**

STUDENTS DO: Record ideas about a topic for the story.

TEACHER SAY: In the big circle, you will write all your ideas. Then you will decide which ideas you want to use. Remember, when we Brainstorm, we write as many ideas as we can. I will ask questions and you will use the questions to start your thinking. Write only in phrases. You do not have to write in sentences at this time.



 STUDENTS DO: Listen and write.

Note to Teacher: Throughout this process, ask targeted questions and pause after each for students to think and write. Do not give specific ideas. Instead, ask questions that will help students think about their own story. Encourage students to stay quiet so that others can think. Provide individual support to students who are struggling, making sure to encourage them to capture their thoughts and ideas, even if they have to draw some ideas rather than write phrases.

TEACHER SAY:

- **Who will be in your story?**
- **How will the character look?**
- **What does the character do?**
- **Why is the character important?**
- **Where does he or she live?**
- **Can he or she be seen in the night sky?**
- **What should we know about your character?**
- **What will we learn from your character?**

TEACHER DO: Pause while students complete their thoughts.

TEACHER SAY: You have many ideas. Let's decide which ideas we like best. You can save some ideas for another story. First read all your notes. Use your pencil to draw a line through ideas you will save for later.

TEACHER DO: Walk around and observe as students review and cross out ideas.

TEACHER SAY: Now you are ready to put together your ideas. Take out three different color crayons. Choose one color to highlight the word, "beginning." Choose a second color to highlight the word, "middle." Use the last color to highlight the word, "end."

 STUDENTS DO: Highlight the three words in three different colors.

TEACHER SAY: Who can tell us what needs to be in the beginning of a story?

 STUDENTS DO: Share ideas (introducing characters and setting).

TEACHER SAY: What happens in the middle of a story?

 STUDENTS DO: Share ideas (the character faces a problem or question, decides what to do or where to go).

TEACHER SAY: And what is the end of the story?

 STUDENTS DO: Share ideas (the problem is resolved, the character changes or learns something).

TEACHER SAY: Now use the crayon you chose for the beginning of the story. Highlight the ideas you will put in the beginning of the story.

TEACHER DO: Follow the same procedure to guide students through finding the middle and the end of the story. When finished, everything on the page should either be crossed out or highlighted in crayon.

TEACHER SAY: Turn to your Shoulder Partner to share your ideas. Talking about our ideas can help us make sense of them. Do your ideas tell a whole story? When one of you has finished sharing, the other person will share.



 STUDENTS DO: Work with **Shoulder Partner** to give feedback on story ideas.

TEACHER SAY: **I am glad to see that you are working so well together. Now it is time for you to take your ideas and put them into your story. Turn to the page My Story in your student book and follow along as I read the directions.**


CHAPTER 1 WHAT IS IN THE NIGHT SKY?

MY STORY

Write your story. Include a beginning, middle, and end. Give your story a title. Draw an illustration on the next page that helps tell the story.

TITLE

106 PRIMARY 2

 READ ALOUD: **Write your story. Include a beginning, middle, and end. Give your story a title. Draw an illustration on the next page that helps tell the story.**

TEACHER SAY: **Do you have any questions about your next steps?**

 STUDENTS DO: Ask questions.

TEACHER SAY: **Now we will have quiet time. Use your imagination. When we are all finished, you will share your stories at your table.**



 STUDENTS DO: Write stories.

TEACHER DO: Monitor the classroom. Periodically remind students of the multiple steps in the instructions. Cue students when they should be moving to the next part of their story and then to the illustration. Offer support if a student is having difficulty forming ideas. If students finish early, have them proofread their work and practice reading. Bring students back together with **Hands Up**.

Note to Teacher: To support the students in writing their stories, it may be helpful to start a list of vocabulary words on the board. Each time a student needs help with a word, or if you notice a misspelled word, add it to the board for all to see. Also, students may have trouble with the flow of their story. Prompt students to return to their outline to recall ideas.

3. TEACHER SAY: **Thank you for working so well today. I know you are all ready to share your writing and your pictures. You have been sitting for a long time. We will Hands Up, Pair Up. When I signal for you to find a partner, you will walk around with your hand up until you find someone to work with. When two of you are together, find a place in the room to sit down. Make sure you have your student book with you. Everyone stand.**

 STUDENTS DO: Put **hands up** and walk around the room when directed by teacher.

TEACHER DO: Make certain all students find partners.

TEACHER SAY: **Sit knee to knee so you can keep your voices low. Remember to be good listeners. Be sure to share your drawings.**

TEACHER DO: Walk around as students share their stories. When students have finished, repeat the **Hands Up, Pair Up** strategy. Allow as many rotations as time permits, then have students return to original seats.

 STUDENTS DO: Share stories.

4. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: **I heard some very good stories. You all have good imaginations. To end our lesson today, we will compliment other students' writing. I will choose one Calling Stick. That student will be our leader. He or she will choose four students to share. Remember, you are telling us what you like about a friend's writing.**

TEACHER DO: Choose a leader. Have the student use **Calling Sticks** to choose four other students.

 STUDENTS DO: Share compliments.

TEACHER SAY: **Thank you all. I heard some very nice compliments. Thank you for encouraging each other.**

Lesson 8 Overview

LEARNING OUTCOMES

Students will:

- Review key learning to identify important facts.
- Collaborate to produce a work of art on a constellation.
- Use appropriate tools to produce art.

KEY VOCABULARY

- Cooperate
- Participate
- Planetarium

MATERIALS

- Large construction paper or other white paper
- Yellow crayon
- Black paint
- Lined paper

PREPARATION

Assign students to groups of three or four before starting the lesson to make the introduction to the lesson run smoothly. Students are expected to work together to write, create a visual, and present. If possible, consider grouping students with diverse strengths together.

Provide resources for students to learn about constellations such as age-appropriate books or websites if students can do research online. Or, print out age-appropriate articles about a few well-known constellations. Encourage students to bring in any books from home or a local library if one is accessible.

LIFE SKILLS

Learn to Work

Collaboration:

- Review individual behaviors with the team.
- Respect for other opinions.

Learn to Work

Critical Thinking:

- Differentiate between reality and imagination



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: I am so excited about today. We will begin working in teams to make our classroom into a planetarium. Let's sing our vocabulary song to remember what a planetarium is.

 **STUDENTS DO:** Sing song.

TEACHER SAY: Why do you think people visit a planetarium?

TEACHER DO: Choose two or three students to respond.

TEACHER SAY: Those are good ideas. People go to planetariums to learn more about our night sky and look beyond the stars we see at night. Do you remember the pictures we saw from the large telescope? What were you able to see in those pictures?

TEACHER DO: Choose two or three students to respond.

2. TEACHER SAY: I am proud of you for remembering. Today we will start preparing for our Share project. You will all be tour guides in our planetarium. Our rubric will help you understand what is expected. Open your student book to My Self-Assessment.

CHAPTER 1 WHAT IS IN THE NIGHT SKY? Lesson 10

MY SELF-ASSESSMENT

Read each statement. For each row, color the stars in the box that describes your effort.

	☆	☆☆	☆☆☆
Academic Content	☆ I can share information about the night sky with help from the teacher or a classmate.	☆☆ I can share accurate information about the night sky.	☆☆☆ I can share information about the night sky learned in class and in research.
Quality of Performance	☆ Some of my presentation was clear and organized.	☆☆ I spoke clearly and organized the information well.	☆☆☆ I spoke clearly, used eye contact, and organized the information to increase interest.
Life Skills	☆ I had some trouble cooperating with my group or completing my task.	☆☆ I cooperated with my group and completed my task.	☆☆☆ I was a leader in my group, helping others work cooperatively and complete their tasks.

PRIMARY 2 111

TEACHER DO: Review the rubric with the students, focusing on the two-star column section.

Remind students that giving themselves two stars is what you expect and that they should be aiming for the actions listed in that middle column. Be sure to review all three rows or sections: Academic Content, Quality of Performance, and Life Skills. Answer any questions.

 **STUDENTS DO:** Review rubric with teacher.

TEACHER SAY: To make our classroom into a planetarium, we will work in groups to share what we know about the night sky. We will present images, stories, and interesting facts about constellations.

TEACHER DO: Assign students to groups of three or four students. Make certain groups are seated together for collaboration. If possible, list the three tasks described below on a chart or on the board at the front of the room. Refer to the tasks as students are working to keep groups focused.

TEACHER SAY: The first choice each group will make is: Will you share a real constellation we can find in the sky or one of your group member's original constellations and stories?

 **STUDENTS DO:** Discuss and choose whether the group will present on a real or original constellation.

Note to Teacher: Students learn about constellations and astronomy in much more depth in the preparatory years. The goal of this project is to communicate the wonder and vastness of the night sky as well as a few basic ideas as a "tour guide," not to memorize information about constellations. To emphasize this goal, use of imagined and fictional constellations is allowed, as long as students recognize and explain the distinction between real and imaginary constellations.

TEACHER SAY: When it is your turn to present as part of our planetarium tour, it will be very important to tell your audience if you are presenting about a real constellation or an original, imaginary one. Why do you think this might be important for our audience to know?



 **STUDENTS DO:** Share ideas.

TEACHER SAY: Your group will be responsible for three tasks. First, you will work together to create a picture of your constellation to hang in the room. Second, you will write to share information or a story about your constellation. Third, you will present some of that information orally. Can someone restate all three parts of the project?

 **STUDENTS DO:** Raise hands to summarize the three tasks.

TEACHER DO: Have digital or paper resources available about a few well-known constellations for groups that want to present on real constellations. Groups can also use information provided in the student book on Orion and Canis Major. If they have no prior knowledge of the chosen constellation, adjust the instructions below to suggest a close observation of a picture, then reading a story and facts about the constellation.

3. TEACHER SAY: If you will present an original constellation, you can use a group member's prior work as a draft. Then, work together to make final versions of the picture and story. If you will present a real constellation, use the resources available to learn about your choice. Then, produce an image and write facts or the story in your own words. Let's start preparing. Talk with your team. What do you already know about your constellation? Remember to listen to each other and give everyone a chance to share.




CHAPTER 1 WHAT IS IN THE NIGHT SKY?

Lesson 8

OUR CONSTELLATION:

Record plans for your group's presentation.

NOTES

What we know:

Questions for research:

TEAMWORK

Responsible for art:

Responsible for labels:

Responsible for information:

108 PRIMARY 2

 **STUDENTS DO:** Share and listen in groups.

TEACHER DO: Walk around and listen to discussion. **Hands Up** when you are ready to bring students back together.

TEACHER SAY: Now turn to the page Our Constellation. Fill in the name of your constellation at the top, and then write or draw notes about what you already know.

 **STUDENTS DO:** Record notes.

TEACHER SAY: Now think, what else do you want to know about your constellation? Share

one question you have with your group. For imaginary constellations, what else do you think the audience will want to know? Record your question or one of your group's questions on the page. You will have time later to research.

 **STUDENTS DO:** Discuss and record remaining questions.

TEACHER SAY: Your first task is to create a picture of your constellations so that we can hang them up around the room.

Note to Teacher: To deepen this visual arts learning experience, have students experiment with the effects of watered-down paints washed over crayon. Then, brainstorm how this effect could be used to create art about the night sky. Have groups choose and justify the colors they want to use to represent the stars and the night sky.

TEACHER DO: Model how to make the constellation picture if all pictures will be drawn in the same style. One option is to draw the stars in a constellation using a yellow crayon, stressing the importance of making the stars large enough. Draw lines to connect the pattern in the stars with crayon, and use either water colors or watered-down black paint to wash the entire page. Distribute supplies to students, including an extra piece of paper for students to briefly record information. Encourage creativity and allow students to come up with other methods to depict the constellations.

 **STUDENTS DO:** Observe and ask questions.

4.TEACHER SAY: Your second task is to write information on the picture. Decide as a team who will create the art and who will write the information. Record who will do what on the page. You will write the name of your constellation and the season it is best seen in the sky. You will need to write it large, so we can all see.

TEACHER DO: Demonstrate the size and the paper to use to write the name of the constellation and the season. Encourage students to practice writing the words as the other team members create the image.

TEACHER SAY: We want our room to look very nice for our planetarium. Take your time and work as a team to create and label your constellation image. If you have a question, I will come help you.



 **STUDENTS DO:** Work in teams to complete the constellation portion of the project.

TEACHER DO: Walk around to monitor progress. Make certain students clean up after they are finished. Help students hang their posters around the room.

Note to Teacher: If resources are available, provide time for groups that finish early to research one or two of their questions using books or digital sources.

5.Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: I saw groups working well together today. I saw participation and cooperation. It is important for all of us to learn to cooperate as we work together. Who can share how one of your friends helped you today? I will choose three of you to share how someone in your group helped today.

TEACHER DO: Choose three students to share using **Calling Sticks**.

 **STUDENTS DO:** Share how a classmate helped them learn today.

Lesson 9 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Manage and organize tasks to complete the Share project. • Work cooperatively in group. • Provide effective feedback within group.	• Checklist	• Student book • Pencils • Constellation displays • Supplies for presentation

PREPARATION

Make sure constellation images produced by students are displayed on four walls. Groups will be presenting to each other according to the placement of the constellations (three groups sharing to each other). Adjust instructions to meet the needs of your class if students are using technology for the presentations. Prepare any materials that will be available for students to use in the presentations.

LIFE SKILLS

Learn to Be	Learn to Work
Self-Management: • Segment goals into specific steps. Communication: • Good listening. • Self-expression. • Reading, writing, non-verbal communication skills.	Collaboration: • Review individual behaviors with the team. • Respect for other opinions.



Share (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Our planetarium is coming together nicely. Your images will be a wonderful resource for your presentations. Without talking, point to your group's constellation.**

 STUDENTS DO: Find and point to constellation.

Note to Teacher: If resources are available and time was not reserved in the previous lesson, allow some time for students to research any questions they have about their assigned constellations prior to continuing with a review of the chapter.

TEACHER SAY: **We have more work to do today to prepare as tour guides for our planetarium. Let's think about what tour guides do. Have you ever been on a tour with a guide?**



CHAPTER 1 WHAT IS IN THE NIGHT SKY? Lesson 1

NOUR AND HOSSAM

Look at the illustrations. Read the story. Circle words you do not know.

Nour and her neighbor Hossam walk home from school. They hear a plane cross the sky.

Nour points to a cloud.
She says, "Look at the cloud.
It looks like my cat."

Hossam says, "Yes, it does."

Hossam points to another cloud.
"This one looks like a pillow."

Nour smiles. She says, "Last night I saw the moon and the stars."

Hossam says, "Sometimes I wonder. Why does the sky change so much?"

PRIMARY 2 91

TEACHER DO: Depending on student answers, have students share what a tour guide does or introduce the basic roles of a tour guide to the class.

TEACHER SAY: **Remember, you are an expert on everything you have learned. You will teach people about what you know. Open your student book to the first page in this chapter, Nour and Hossam. Let's review what we have learned by looking back at all of our work in this chapter. Ask yourself, what should we share with others?**

TEACHER DO: Walk around as students look through their work. Make certain students are only looking at pages in the current chapter. Use **Hands Up** to bring students back together.

STUDENTS DO: Read and reflect on work.

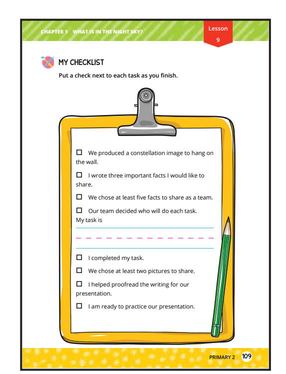
TEACHER SAY: Let's record some of your ideas about what we can share in our presentations for this chapter.





STUDENTS DO: Share ideas about what can be presented.

TEACHER DO: Write student responses on the board or on chart paper. Leave as reference for students to use.



2. TEACHER SAY: These ideas will help us in our presentations. Let's think about what we need to accomplish to finish our project. Turn to the page in your student book, My Checklist. This checklist will help you and your group keep track of everything you have done and still need to do. The checklist helps us finish a big task by breaking it into smaller steps.

TEACHER DO: Duplicate the checklist on the board or chart paper. To explain how a checklist can help break down a complex task into steps, use the example of writing stories in a recent lesson.

TEACHER SAY: When we wrote our stories in this chapter, we did not use a checklist, but we used a similar process. Who remembers the steps we used to write our stories?



STUDENTS DO: Share ideas.

TEACHER DO: Allow multiple students to respond, emphasizing the writing process of thinking or brainstorming, then writing a beginning, middle, and end of the story. Write the steps in the format of a checklist on the board to provide a familiar example for students.

TEACHER SAY: Well done. You have produced a checklist to break down the goal of writing a story. The checklist in your book helps us do the same thing with our presentation. It breaks our project into smaller steps, so we can manage our work. Turn to your Shoulder Partner and explain how a checklist can help us.





STUDENTS DO: Explain why checklists are helpful.

TEACHER SAY: Your group will work together as a team of tour guides. You will be leading a tour of the night sky, just as guides do in a planetarium. You will work together to decide which facts you want to share. Then you will find or make images to help you in your presentation. The checklist will help you make sure everything is complete. Let's read through it now.

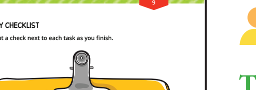
TEACHER DO: Read through the checklist. Pause between each task to allow time for students to think or ask questions as needed. Respond to any questions according to your own classroom and the supplies students will be using. The first task was done in the previous lesson, so students can check it off.

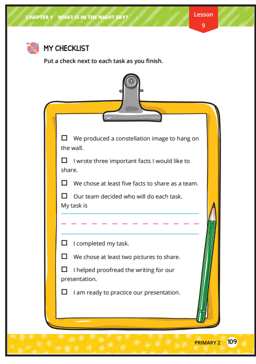
3. TEACHER SAY: Now that we know our steps, let's get started. Turn to the page My Three Facts.



READ ALOUD: Write three important and interesting facts you learned in this chapter.

TEACHER SAY: We will use Think Time for a few minutes to decide what facts to write. Use your student book and our class list to review the chapter. Then choose and record three facts that you would like to share as a tour guide in our planetarium.





STUDENTS DO: Quietly think, choose three facts, and record them in the student book.

TEACHER DO: Walk around to answer any questions while students are working independently. If asked how to spell a word by one student, you may wish to write it on the board so all can see. Remind students that they can use the list created by the whole group.

TEACHER SAY: I saw students using their books. I saw you really thinking about your three facts. I am very proud of your work. Now go back to the page My Checklist and put a check next to the second task: I wrote three important facts I would like to share.



STUDENTS DO: Mark a check on their checklists.

TEACHER SAY: **Now it is time to listen to each other's ideas. Share your three facts with your group. Some of you probably chose some of the same facts. Your next task is to choose five facts that your group will share. You should include at least one fact from each member of your team. When your fact is chosen, circle the fact or facts in your book that will be shared.**

TEACHER DO: If needed, choose two students to help **Model** listening skills and then choosing five ideas. Encourage advanced students to find ideas that are related to each other for the presentation.

TEACHER SAY: **You will have 10 minutes to share and make your choices. Remember to listen to each other.**





STUDENTS DO: Work cooperatively within groups.

TEACHER DO: Walk around the classroom, making certain all students are being heard and following directions given. Bring students back together with a **Hands Up** signal when 10 minutes has ended or when all groups have finished.

TEACHER SAY: **Who can share your group experience with the class? How well did your group listen to each other? How did you decide what facts to share?**

TEACHER DO: Choose two or three students to share who you noticed were on task and working cooperatively.

TEACHER SAY: **Raise your hand if your group has chosen five facts.**



STUDENTS DO: Raise hands to signal completion.

4. TEACHER SAY: **If you have not finished yet, you will have more time to work in a few minutes. If you have finished, go back to the page My Checklist and check off the third task. You are all making very good progress. Shake hands with a member of your team.**



STUDENTS DO: Shake hands to acknowledge progress made.



5. TEACHER SAY : **Now it is time for everyone in your group to choose a job that will help the whole group. I will write on the board the tasks that need to be completed for the presentation.**

TEACHER DO: Write on the board all tasks you want your students to do. Tasks can include:

- Write the facts in complete sentences. Write neatly for the presentation.
- Proofread the sentences.
- Find or create at least one more picture that supports the facts to be shared.
- Decide if there are other components you want to add to the assignment. Review the tasks orally with the students.

TEACHER SAY: **Think about how many students are in your group. As a group, decide who will do each task. Everyone will participate. Write your task on the line of your checklist.**



STUDENTS DO: Work cooperatively to determine jobs.

TEACHER DO: Walk around the classroom, guiding as needed and encouraging students to compromise and resolve conflicts. Bring students back together to the whole group.

TEACHER SAY: **Now it is time for you to complete your task. I have a question before we start. What should I see and hear if we are all working?**



STUDENTS DO: Suggest answers such as working quietly, talking quietly, and taking care of supplies.

TEACHER DO: Show students supplies that are available. Give any guidelines, including sharing and cleaning up the area when finished. Monitor student progress. Give students adequate time to complete their tasks. Remind students they will be presenting as a group the next day.



STUDENTS DO: Complete assigned work.

6. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: **I saw some very good cooperation today.**

TEACHER DO: Give a few examples of good behavior that you saw.

TEACHER SAY: **During our next lesson, everyone will present their information as tour guides. You will have time to practice before we present. As we end today, take five minutes to decide who is going to say each part of your presentation.**



STUDENTS DO: Decide as a team who will present each part.

TEACHER SAY: **Thank you for working as teams today. I am excited to see all of your presentations.**

TEACHER DO: If you invited families or another class to observe, remind students of this now. Prepare students for welcoming visitors to the classroom.

Lesson 10 Overview

LEARNING OUTCOMES

Students will:
- Use communication skills to orally present information.
- Work collaboratively to present with a group.
- Self-assess using the student rubric.

MATERIALS

- Student book
- Pencils
- Student projects

PREPARATION

Determine where and how students will present. If guests will be joining, make certain students tidy the classroom beforehand and know where they will be presenting. If no guests will be coming, match up three groups who can present to each other and assign appropriate spaces in the room.

Write guidelines on the board/chart paper for speaking. Adapt as you see fit for your class.

1. Look at the audience when you speak.
2. Speak loudly enough for all to hear.
3. Point to your picture when you talk about it.
4. Say, "Thank you for listening," at the end.

LIFE SKILLS

Learn to Be

Self-Management:
- Segment goals into specific steps.

Communication:
- Good listening.
- Self-expression.
- Reading, writing, and nonverbal communication skills.

Learn to Work

Collaboration:
- Review individual behaviors with the team.
- Respect for other opinions.



Share (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **I see that you are excited about presenting today. Before we begin to practice, we need to add checks to our checklist. Please open your student book to My Checklist. How does our checklist help us?**

 STUDENTS DO: Share ideas.



TEACHER SAY: **Yes, this checklist helps us break a big project into smaller tasks. We can track our progress to completion. The next two lines say, "I have completed my task," and, "Our team has chosen at least two pictures to share." Discuss with your team and check these items if they are complete.**

 STUDENTS DO: Check tasks if applicable.

2. TEACHER SAY: **We have a few minutes to work. If either your task or the pictures are not yet ready, complete them now. Any group member who is done with their task will help the writers by proofreading the sentences. The writer is the one who will make any corrections if needed.**



 STUDENTS DO: Complete tasks; proofread and correct sentences.

Note to Teacher: This time serves two purposes. Students practice proofreading together, and they are able to review the information.

TEACHER DO: Be prepared to show students where they will practice and present. Bring students back together to the whole group after about five minutes.

TEACHER SAY: **Review the final two items of your checklist now with your team and check off the ones that are completed.**



STUDENTS DO: Check off tasks if applicable.

3. TEACHER SAY: **Before we practice, let's review good presentation skills. Who can share some of the things we need to remember?**

TEACHER DO: Choose as many students as needed to help lead a short discussion about speaking and listening skills. Review the prepared list of tips and reminders.



STUDENTS DO: Respond with ideas (face the audience, speak loudly, take turns, be respectful, point to pictures if needed, be prepared).

TEACHER SAY: **I am so glad you know what we should do when presenting to others. We always practice a presentation before we give it.**

TEACHER DO: Direct students to designated areas to practice. Help students post visuals if needed.



STUDENTS DO: Practice presentations.

4. TEACHER DO: Bring students back together. If guests are coming, instruct students on how to welcome the visitors to the class. Adjust the conversation below for the context of your class's presentations.

TEACHER SAY: **I can see that everyone is ready to present. I will walk around to listen to your presentations. As each group finishes, please take time to give them three compliments. What types of things might you compliment?**



STUDENTS DO: Offer ideas such as speaking loudly, speaking clearly, and sharing interesting facts.

5. TEACHER SAY: **I think you are ready. Tour guides, please go to your areas. Decide which group will present first. Remember to be respectful listeners. You will be learning from each other.**





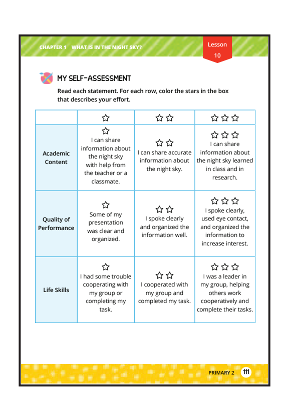
STUDENTS DO: Present to each other and guests if applicable.

TEACHER DO: Walk around, listening to presentations. Bring students back together after everyone has presented. If guests were invited, cue students to thank them for coming.

TEACHER SAY: **I am proud of all of you. Let's take just a few minutes to thank the other groups that presented to you.**



STUDENTS DO: Thank groups.



CHAPTER 1 WHAT IS IN THE NIGHT SKY?

Lesson 10

MY SELF-ASSESSMENT

Read each statement. For each row, color the stars in the box that describes your effort.

	☆	☆☆	☆☆☆
Academic Content	☆ I can share information about the night sky with help from the teacher or a classmate.	☆☆ I can share accurate information about the night sky.	☆☆☆ I can share information about the night sky learned in class and in research.
Quality of Performance	☆ Some of my presentation was clear and organized.	☆☆ I spoke clearly and organized the information well.	☆☆☆ I spoke clearly, used eye contact, and organized the information to increase interest.
Life Skills	☆ I had some trouble cooperating with my group or completing my task.	☆☆ I cooperated with my group and completed my task.	☆☆☆ I was a leader in my group, helping others work cooperatively and complete their tasks.

PRIMARY 2 111

6. TEACHER SAY: **I hope you are proud of your learning. Let's look at your student rubric. It is time for each of you to think about how you have met your goals for the project. Turn to the page in your student book, My Self-Assessment.**

TEACHER DO: Guide students through the rubric, focusing on one line at a time. Be sure to remind students that it is okay to choose one star when appropriate. Recognizing when we have more work to do provides motivation for more learning.



STUDENTS DO: Complete rubric.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: **Today ends the first chapter of "The World Around Me." You have learned a lot about the night sky. I hope you will continue to look at the sky and the constellations. In our next chapter, we will explore our environment and the habitats that we find. Now it is my turn to thank you. Thank you for all your work and for learning with me.**

 **STUDENTS DO:** Put away supplies and clean area.

Rubric Assessment (for teacher use)

	Approaching Expectation (1)	Meeting Expectation (2)	Exceeding Expectation (3)
Academic Content	Describes objects in the night sky in basic terms or with one or more inaccuracies. *Science B.1.a. and B.1.b.*	Describes objects in the night sky using vocabulary and concepts learned in class (such as variations in size and brightness). *Science B.1.a. and B.1.b.*	Describes objects in the night sky using vocabulary and concepts learned both in class and through independent research. *Science B.1.a. and B.1.b.*
	Shares facts learned from informational text but includes inaccurate or misapplied information. *F.1.b. and F.8.a*	Shares key facts learned from informational text accurately. *F.1.b. and F.8.a*	Shares key facts learned from informational text and describes relationships between the facts. *F.1.b. and F.8.a*
	Chooses one or more irrelevant facts or details to share. *Speaking and Listening A.2.a.*	Chooses appropriate facts and relevant, descriptive details to share. *Speaking and Listening A.2.a.*	Chooses facts and relevant, descriptive details to share based on the interests of the audience. *Speaking and Listening A.2.a.*
	Writes complete sentences with help. *Writing 1.a.*	Writes complete sentences. *Writing 1.a.*	Writes complete sentences that include above grade-level complexity or vocabulary. *Writing 1.a.*
Quality of Performance	Speaks to audience members but may be difficult to hear or understand.	Speaks clearly to audience members.	Speaks clearly to audience members with great confidence.
	Creates visuals that are not very neat or are difficult to read.	Creates visuals that are neat and easy to read.	Creates appealing, creative visuals that are neat and easy to read.
Life Skills	Needs help to use a checklist to ensure that all steps of a process have been completed.	Uses a checklist independently to ensure that all steps of a process have been completed.	Uses a checklist independently to ensure that all steps of a process have been completed and helps peers to use the checklist effectively.
	Assesses self using a rubric with help and may have a hard time understanding how to meet expectations.	Assesses self accurately using a rubric.	Assesses self accurately using a rubric and is able to set goals for future work.

PRIMARY 2

Multidisciplinary

WORLD AROUND ME

Chapter 2:Helping My Habitat

Theme Overview

Helping My Habitat

COMPONENT	DESCRIPTION	LESSONS
Discover	Students explore environments through pictures and observation. Students read a story about a child and his garden to consider how people interact with the environment. A vocabulary word of the day is introduced to help students clarify understanding of new words.	2
Learn	Students learn about the habitats of plants and animals and what is required for survival. They learn that changing a habitat can have major impact on the inhabitants. Students learn the engineering design process and use it to build a product to help a plant or animal in its habitat.	7
Share	Students work in teams to present a project that will help a plant or animal flourish in its habitat. After completion, students write a persuasive letter to ask for help in building the project.	1

Connection to Issues



Environment and Development: Our earth and environment need to be sustained. We can appreciate and care for the environment as a community.

Citizenship: We belong. We are part of our communities, country, and the human family. We all have rights and we all have responsibilities.

Life Skills Addressed



DIMENSION	DESCRIPTION
Learn to Know	**Critical Thinking:** • Differentiate between reality and imagination. • Define relationships between different objects. **Creativity:** • Organize parts to form a new or unique whole. **Problem-Solving:** • Analyze the parts of the problem.
Learn to Work	**Collaboration:** • Respect for other opinions. **Productivity:** • Setting clear goals.
Learn to Live Together	**Sharing:** • Effective management and organization of tasks.
Learn to Be	**Self-Management:** • Segment goals into specific steps. **Accountability:** • Provide effective feedback. **Communication:** • Good listening. • Reading, writing, non-verbal communication skills.

Learning Indicators

Throughout this chapter, students will work toward the following learning indicators:

READING:

D. Reading Skills: Fluency

1.a. Read texts at grade-appropriate difficulty with a level of accuracy and fluency to support understanding.
1.b. Read a variety of texts, recognizing and understanding the purpose of the text.
1.c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

E. Reading Comprehension: Literature

1.a. Ask and answer questions (who, what, where, when, why, and how) about key details in a text.
1.b. Describe how characters in a story respond to major events and challenges.
2.a. Recount stories, including details, and determine their central message and lessons.
7.a. Read and comprehend literature, including stories and poetry, at appropriate difficulty level for Primary 2.

F. Reading Comprehension: Informational Text.

1.a. Follow written instructions.
1.b. Ask and answer questions (who, what, where, when, why, and how) about key details in a text.
2.a. Identify the main purpose of a text (paragraph and multi-paragraph), including what the author wants to answer, explain, or describe.
3.a. Describe the relationship between two people, events, ideas, or pieces of information in a text.
4.a. Define words and phrases based on use and context in the text.
5.b. Distinguish how specific images (such as diagrams or graphs) provide information.
8.a. Read and comprehend informational text at appropriate difficulty level for Primary 2.

G. Language: Vocabulary Acquisition and Use

1.a. Use sentence-level context to infer, confirm, or correct the meaning of words.
1.f. Orally replace informal language with its formal counterpart.

WRITING:

A. Foundational Skills

1.a. Write complete sentences.

C. Informational and Opinion

1.a. Write short, explanatory texts introducing a topic and using facts to develop details.
1.b. Write short texts expressing an opinion and providing at least one reason to support the opinion.

D. Process, Production, and Research

2.a. Use a variety of digital tools to produce and publish writing, independently and in collaboration with peers.
2.b. Participate in collaborative research.

SPEAKING AND LISTENING:

A. Foundational Skills

1.a. Participate in collaborative conversations with peers and adults about various topics and texts.
1.b. Follow agreed-upon rules for discussions.
1.c. Build on others' talk in conversations by linking their comments to the remarks of others.
1.d. Ask questions to clarify any misunderstandings concerning the topics and texts under discussion.
2.b. Recount key ideas or details from a text read aloud or information conveyed orally.
5.a. Speak in complete sentences, following grammatical rules, when appropriate to task and situation.

MATH:

D. Measurement and Data

1.a. Measure lengths of objects in centimeters or meters.

SCIENCES:

A. Skills and Processes

1.a. Ask questions based on observations to find more information.
1.c. Use observations to describe patterns.
1.d. Use observations to explain an experience.
1.e. Differentiate between opinion and evidence.
1.f. Obtain information using various texts and text features to answer a question.
1.g. Communicate information with others in oral and written forms.

E. Environmental Science

1.a. Describe characteristics of a variety of habitats and the organisms that live within each habitat (agricultural, desert, mountain, coastal).
1.b. Describe how a habitat can meet the needs of living things.
1.c. Make observations of plants and animals to compare the diversity of life in different habitats.

F. Engineering Design and Process

1.c. Develop an understanding of engineering design.
1.e. Develop the abilities to apply the design process.
1.f. Develop the abilities to assess the impact of products and systems.

SOCIAL STUDIES:

A. Citizenship

1.f. Identify ways in which citizens can help preserve local environments.

C. Understanding the World from a Spatial Perspective

1.b. Describe a place using bird's-eye view, satellite images, photographs, and pictures.
1.c. Identify the location of Egypt and Egypt's main regions on a map.
1.e. Identify and describe natural/physical features

and human-made features of places using maps and photographs.

B. Environment, Society, Culture

1.b. Describe ways in which individuals and groups use and consume water.

VOCATIONAL FIELDS:

A. Career Social Skills and Preparation

1.b. Work cooperatively with another student to accomplish a task.

INFORMATION AND COMMUNICATION TECHNOLOGIES:

C. Technological Production Tools

1.a. Use digital technologies (such as a computer) appropriately to support learning.

1.b. Identify the appropriate program or application to complete a task

1.c. With support, use digital sources to search for and collect content to answer a specific question.

COMPUTATIONAL THINKING:

Life Skills

- Learn to Know: Problem Solving: Analyze the parts of the problem.

Science

F.1.c. Develop an understanding of engineering design.

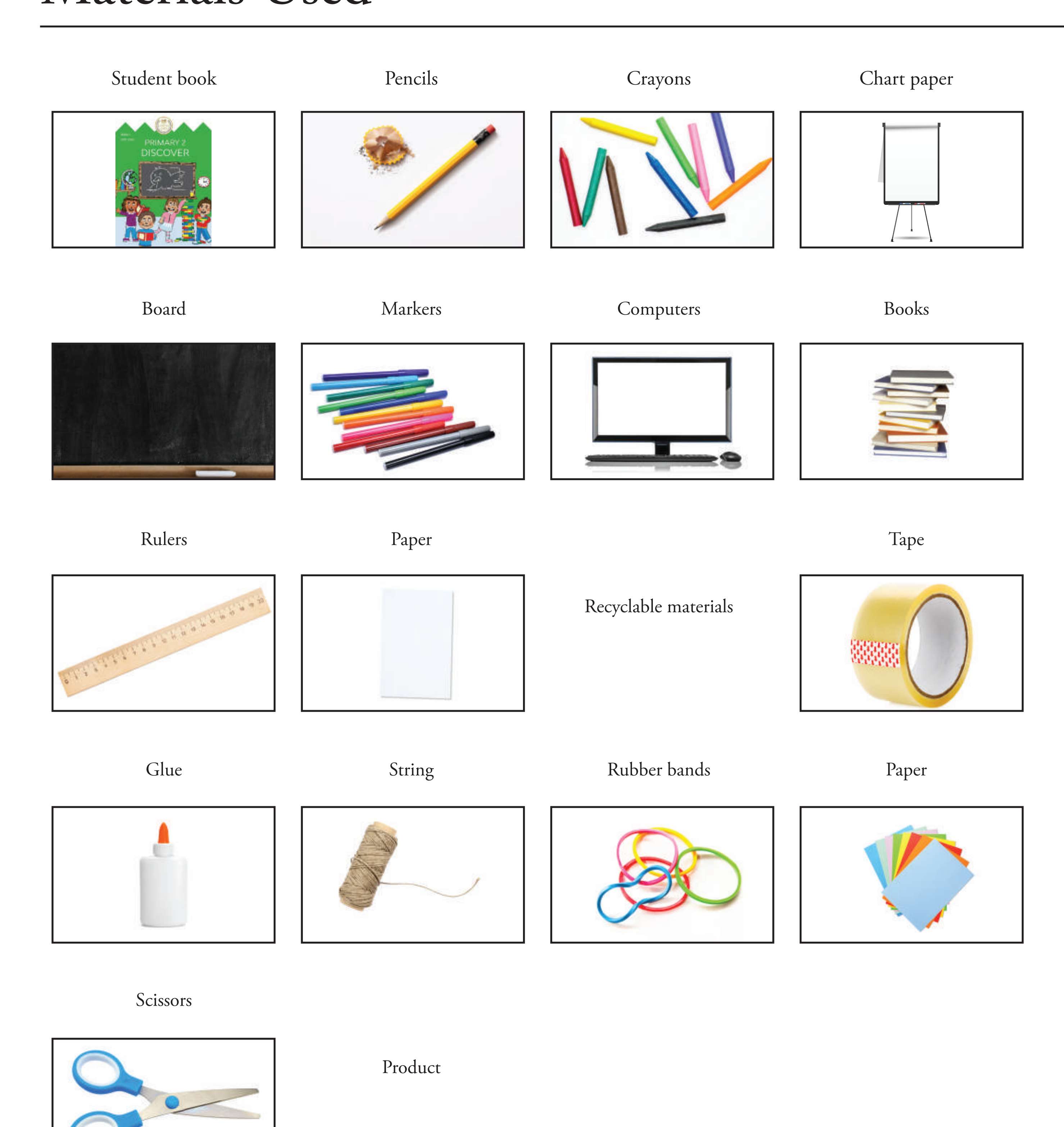
F.1.e. Develop the abilities to apply the design process.

CH 2

Pacing Guide

LESSON	INSTRUCTIONAL FOCUS
1	**DISCOVER: Students will:** • Use observation skills to describe environments. • Define, illustrate, and use new vocabulary in a sentence. • Learn about the Share project for "Helping My Habitat."
2	**DISCOVER: Students will:** • Infer meaning within a story. • Provide evidence for inference. • Explore the school environment.
3	**LEARN: Students will:** • Record observations of different habitats, including similarities and differences. • Describe characteristics of a variety of habitats. • Describe some living things that live in different habitats.
4	**LEARN: Students will:** • Research the natural environment of a plant or animal. • Record information learned and the source of the information.
5	**LEARN: Students will:** • Describe Egypt using a satellite image. • Explain impact on living things when environments change. • Identify ways in which people can influence local environments.
6	**LEARN: Students will:** • Research ways to attract wildlife. • Describe how characters in a story respond to challenges.
7	**LEARN: Students will:** • Apply steps of engineering design. • Use the engineering design process to plan a product to help the environment.
8	**LEARN: Students will:** • Use the engineering design process to build a product to help the environment. • Collaborate respectfully to complete a task.
9	**LEARN: Students will:** • Use the engineering design process to test and improve a product to help the environment. • Listen and respond to others' ideas.
10	**SHARE: Students will:** • Analyze writing to identify persuasion. • Write a persuasive letter expressing an opinion and supplying reasons for that opinion. • Reflect and self-assess own progress in learning.

Materials Used



Lesson 1 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Use observation skills to describe environments. • Define, illustrate, and use new vocabulary in a sentence. • Learn about the Share project for "Helping My Habitat."	• Environment • Vocabulary	• Student book • Pencils • Crayons • Chart paper or board • Markers

PREPARATION

Bring one or more photos or videos of your local community that show details of a natural environment, including plants and animals. Videos and photos can be displayed electronically, or photos can be distributed to groups to review.

Students will research local plants and animals during this chapter. Be prepared in Lessons 4 and 6 to make resources available (such as internet access, books, or regional videos) that may help students learn about local plants and animals. You may consider supplying specific names of birds, butterflies, and other species that students can research. This would also be a good time to invite a guest speaker to talk about the plants and/or wildlife within the community or to plan a field trip to a nearby garden store.

LIFE SKILLS

Learn to Be

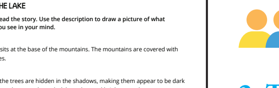
Communication:

- Good listening.
- Reading, writing, non-verbal communication skills.



Discover (90 minutes)

Directions



1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen. Encourage students to lead this routine as they become more comfortable.

TEACHER SAY: We just completed our first chapter of the "World Around Me." Who would like to share why learning about the night sky helped us understand our world better?



STUDENTS DO: Reflect on learning.

2. TEACHER SAY: Maybe we have some future astronomers in our class. Today we are starting a new chapter called, "Helping My Habitat." Our focus will move from the sky to the land around us. We will learn about our own environment, which is another important part of the world around us. Let's begin this chapter by using our imagination. Turn to the first page in this chapter, The Lake, and read the directions to yourselves.



STUDENTS DO: Read directions.

TEACHER SAY: As you read the story, pay close attention to the description. The place described may not be familiar to you. Since you might not have seen a place like this, you may want to read the story more than once. Use the story to draw a picture of what you see in your mind.

TEACHER DO: Pair or group students as needed to read the story. Walk around to support students as they draw what they imagine from the story description. Ask questions such as, "Which part of the description are you drawing now?" When finished, ask students to share with a **Shoulder Partner**.

TEACHER SAY: Show Thumbs Up if you would like to live in the environment you drew.

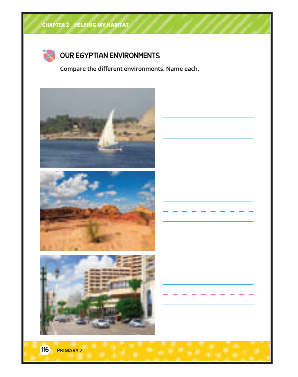
 **STUDENTS DO:** Respond.

TEACHER SAY: To draw your pictures, you needed a good description of the environment. Since we will be learning about different environments, let's practice describing them. This will help us understand how environments are similar and different. We will start with the environment around our school. Who can describe something in the local environment?

 **STUDENTS DO:** Volunteer to offer ideas.

Note to Teacher: Students will learn the word "environment" as a vocabulary word later in the lesson. For now, use the discussion as a way to elicit prior knowledge. Rather than pausing to define the word, note both what students describe and what they might miss about the local environment. Prompt with questions such as: What is the ground like around the school (grassy, sandy, and so on)? What plants grow near the building?

TEACHER SAY: There are so many different environments in Egypt. Who has been to a place or has seen pictures of a different environment in Egypt than we have here? Use Think Time and then we will Popcorn to discuss.



CHAPTER 2 HELPING MY HABITAT

OUR EGYPTIAN ENVIRONMENTS

Compare the different environments. Name each.

116 PRIMARY 2



TEACHER DO: Facilitate discussion to focus on comparing environments, such as desert, farmland, country, or city, to your own community. Prompt students with questions such as, "Is that similar or different to our local environment?" If available, use a map to show places when students reference them.

 **STUDENTS DO: Popcorn** discussion.

3. TEACHER SAY: You already know a lot about Egyptian environments. Let's use close observations to get even better at describing these environments. First, open to Our Egyptian Environments in your student book. Once you find the correct page, read the directions with your Shoulder Partner. Begin discussing what you observe in each of the environments.

 **STUDENTS DO:** Discuss pictures at tables.

TEACHER DO: Walk around, listening to discussions. Encourage students to look at many aspects of each picture, including the landscape (water, mountains), plants (trees), as well as evidence of human activity (sailboat, buildings). Bring students together to discuss.

TEACHER SAY: Let's talk about how the three environments are similar. Who would like to share some of your thoughts? We will then Popcorn our discussion.

TEACHER DO: Facilitate a **Popcorn** discussion based on the following questions:

- How are these environments similar?
- How would life in these environments be the same?
- How are the environments different?
- How would life in these environments be different?

 **STUDENTS DO: Popcorn** ideas.

4. TEACHER SAY: Good thinking. Now we will apply your thoughts to some new some photos I have brought in for you to look at. Work with your Shoulder Partner to observe the photos and describe the environment you see.

TEACHER DO: Display or distribute the photos or videos of a local environment. Encourage students to be good observers by looking for details that help describe the environment.

TEACHER SAY: Who identified something in a photograph that we did not mention earlier when we described our environment from memory?

 **STUDENTS DO:** Share observations.

TEACHER SAY: Our environment includes animals, plants, natural, and human-made objects.

Is there anything else in our environment?

 STUDENTS DO: Share ideas.

TEACHER DO: Facilitate discussion, helping students categorize what is seen in the images into the four major categories above. If students mention humans, remind them that humans are considered animals.

TEACHER SAY: **One group we [did/did not] mention is people. People are part of the environment too. When we talk about our environment, we include all of our surroundings, even human-made objects. I have a thinking question for you: Do you think all of our human-made objects help the natural environment?**

TEACHER DO: Provide Think Time.

TEACHER SAY: **Let's share our ideas. What are some human-made objects that we think DO help the environment?**

 STUDENTS DO: Identify examples and explain how human-made objects help the environment.

TEACHER SAY: **Are there human-made objects that might hurt the natural environment?**

 STUDENTS DO: Explain ideas.

5. TEACHER SAY: **You have some good ideas. We will talk again later about human-made objects in our environment. First, let's think about the word ENVIRONMENT. In this chapter, we will be recording vocabulary words in a new way. Our first word is ENVIRONMENT. I will write a definition on the board. As I write, think about whether you agree with the definition. Is this how you define the word? Is something missing in your understanding?**

TEACHER DO: Write the definition, "the surroundings or conditions in which a person, animal, or plant lives."

TEACHER SAY: **By this definition, is our classroom an environment?**

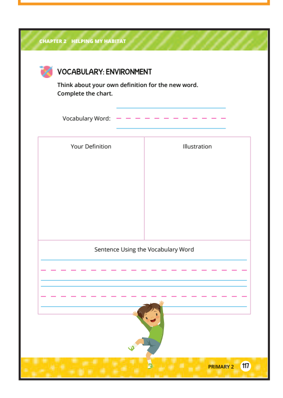
 STUDENTS DO: Share ideas.

TEACHER DO: Facilitate discussion, prompting students to use the definition to help argue for why the classroom is or is not an environment. Use Calling Sticks or another strategy for equitably choosing students to share.

TEACHER SAY: **Has anyone changed their understanding because of our new information?**



 STUDENTS DO: Clarify ideas through discussion.


CHAPTER 2 HELPING MY HABITAT

VOCABULARY: ENVIRONMENT

Think about your own definition for the new word.
Complete the chart.

Vocabulary Word:

Your Definition	Illustration

Sentence Using the Vocabulary Word

PRIMARY 2 117

6. TEACHER SAY: **During this chapter, we will all agree on the meaning of our vocabulary words and how to use them in a sentence. Let's turn to the next page in your student book, Vocabulary: Environment. We will start with the word ENVIRONMENT.**

TEACHER DO: Recreate the chart from the student page onto the board or on chart paper. Model completing the chart as each section is discussed.

TEACHER SAY: **Follow along with me and we will complete the chart together. First write the word "environment" in the box next to "Vocabulary Word."**

TEACHER DO: Complete each box, one at a time, guiding student discussion along the way. For the second box (the definition) choose whether you prefer students to copy the definition provided or write the definition in their own words. In the third box, draw and color a picture of an environment. In the final box, write a sentence using "environment" correctly. Introduce this final skill with more detail, examples, and plenty of practice as needed.


STUDENTS DO: Complete the page along with the teacher.

TEACHER SAY: I really like this chart because it helps us understand the meaning AND how to use a vocabulary word. Take some time to share your work with your Shoulder Partner.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Thank you for working so well today. As we learn more about our environment, we will learn about the plants and animals that live around us. Your Share project in this chapter will be to design something that will help the plants and animals in our environment. As we learn, we will think about ways we can help the environment. Let's thank those who helped us today. Turn to your Shoulder Partner and tell how your partner helped you today.


STUDENTS DO: Thank each other.

Lesson 2 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Infer meaning within a story. • Provide evidence for inference. • Explore the school environment.	• Environment • Infer	• Student book • Pencils • Crayons • Chart paper or board • Markers

PREPARATION

Determine an area where students can examine the natural environment near the school. This could be the schoolyard, a park, or a small planted area in the school. If it is not possible to have the class go outside, you can have groups of students observe from the windows.

LIFE SKILLS

Learn to Be

Communication:
- Good listening.
- Reading, writing, non-verbal communication skills.



Discover (90 minutes)

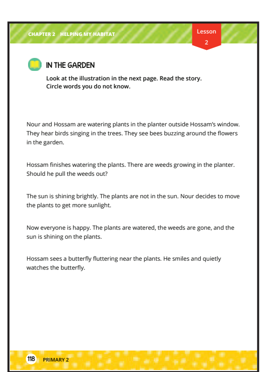
Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen.

TEACHER SAY: **In our last lesson, we observed different environments and defined the word ENVIRONMENT. Let's review to make sure we remember. I will use Calling Sticks to choose three students to explain what an environment is. Be sure to listen to the person who answers before you and add details when it is your turn.**



STUDENTS DO: Share, building on each other's definitions.



CHAPTER 2 HELPING MY HABITAT
Lesson 2

IN THE GARDEN

Look at the illustration in the next page. Read the story. Circle words you do not know.

Nour and Hossam are watering plants in the planter outside Hossam's window. They hear birds singing in the trees. They see bees buzzing around the flowers in the garden.

Hossam finishes watering the plants. There are weeds growing in the planter. Should he pull the weeds out?

The sun is shining brightly. The plants are not in the sun. Nour decides to move the plants to get more sunlight.

Now everyone is happy. The plants are watered, the weeds are gone, and the sun is shining on the plants.

Hossam sees a butterfly fluttering near the plants. He smiles and quietly watches the butterfly.

118 PRIMARY 2

2. TEACHER SAY: **Excellent. Think about what you know about environments as we read a story about Hossam. Open your student book to In the Garden. Once you find the page, read the directions to yourself. Then, follow the directions to read the story on your own. If you would like, you may read with a Shoulder Partner, but please keep your voices low.**

TEACHER DO: While students are finding the correct page, assign or match groups of three or four to discuss the reading.

Note to Teacher: If your students are not ready to read on their own, adjust the directions to a read aloud with students following along.

TEACHER SAY: **Now that you have read the story once, you will read it again as a group. Each of you will read one short paragraph aloud. If you need help with a word, show a Thumbs Up to your group. Help each other read but wait until you see your classmate asking for help. When you are done with your section, ask your group: How does the illustration help us understand the story?**

TEACHER DO: Use Calling Sticks to ask a student to summarize the directions.

TEACHER SAY: **Thank you. If you have any questions, ask one of your team members. If all of you have the same question, raise your hands together and I will come to help you.**



 STUDENTS DO: Read the story and discuss the illustrations.

TEACHER DO: Monitor the class and listen to discussions. Add questions only if needed to help students in their discussions.

3. TEACHER SAY: **I heard some good discussions. Let's think about the story together now. What did you read or see in the story that describes the environment? We will Popcorn some answers.**

 STUDENTS DO: Share ideas, including the garden, birds, and so on.

TEACHER SAY: **Good thinking. Why do you think Nour moved the planter to the sunlight?**

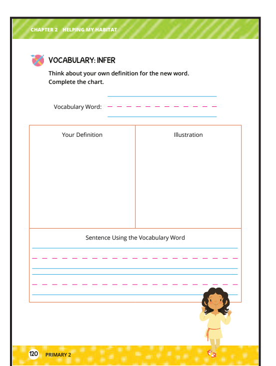
 STUDENTS DO: Share ideas.

TEACHER SAY: **Something happened at the end of the story that was not explained. What did Hossam do at the end of the story? Why do you think the author did not explain? I will use Calling Sticks to choose students to answer.**

 STUDENTS DO: Share ideas.

TEACHER SAY: **Hossam smiled at the end of the story, but the author did not tell us why. Sometimes an author wants the reader to think about the story and use clues from the story to decide why an event happens. When we use clues to understand, we INFER. What can you INFER about WHY Hossam smiled?**

 STUDENTS DO: Share ideas.



4. TEACHER SAY: **I agree with many of you. I think Hossam is happy to see the butterfly and the other animals coming to the garden. We are able to INFER why Hossam is smiling in the story. INFER is such an important word for us to remember. Let's define and use it, like we did with ENVIRONMENT. Turn to the next page in your student book, Vocabulary: Infer. Please review the directions.**

 STUDENTS DO: Read directions.

TEACHER SAY: **When we INFER, we can reason about something that is happening without being told. We can INFER in our reading or even here in class.**

TEACHER DO: Give students one or more examples to practice inference. Examples could include:

- Students infer your favorite color by describing objects in the classroom that have your favorite color
- Students infer your favorite genre of book by showing them some of your favorites
- Students infer your next vacation by reading a list of what you will take with you.

If students show solid understanding, allow two or three students to offer examples as well, with the entire class inferring from the information shared.

TEACHER SAY: **You are very good at inferring. I think we are ready to write our own definition now. I will write one definition on the board. You write a definition in your own words.**

TEACHER DO: Write the definition on the board for students' reference. When students are finished, guide them through the remainder of the page.



 STUDENTS DO: Complete page with help as needed.

5. TEACHER SAY: **In our story, we learned about Hossam's environment and the many things he and Nour saw. Let's go outside to explore our own environment here at school. We will sit quietly and record everything we see. Turn to the next page in the student book, Our Environment. Read along as I read the directions.**

 READ ALOUD: **Sit quietly. Listen and look around you. Write or draw what you see.**

TEACHER DO: Direct students to sort what they see in columns under plants, animals, and human-made objects. Continue the directions by explaining where the class will go outside and your expectations of behavior. Emphasize the importance of quiet and to only record in the top box. When ready, take students outside. Sit quietly for five to ten minutes or as long as you feel appropriate for your class. Lead students back to the class for discussion.

Note to Teacher: To adapt the experience for students who have difficulty with writing, encourage them to draw what they see. If there are blind or near-blind students in your class, encourage the use of other senses: pair them with another student to record observations that include what is heard or smelled in the environment.

TEACHER SAY: I appreciate how quiet you were outside. Why do you think it was important for us to be quiet?

 **STUDENTS DO:** Share ideas.

6. TEACHER SAY: Yes. If we are noisy, animals will leave the area. If we are quiet, they sometimes stay nearby. Let's review what we saw and heard in our environment. I will record your answers while you respond. Please Popcorn what you observed in our school environment.

TEACHER DO: Record responses on chart paper or in an area where the list can be saved for the next lesson. If students did not see very much animal life outside, that is okay. You are only recording what they experienced.

TEACHER SAY: Thank you for helping us create our list. At the bottom of the page, there is another section to draw what you see at home. When you go home from school today, please take some time to go outside or look out a window. Sit quietly and record on a piece of paper what you see in your own environment at home. In our next lesson, you will record your observations in your student book.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Thank you for being so thoughtful today. Let's close our discussion by telling your Shoulder Partner how inference can help you understand stories and the world around you.

 **STUDENTS DO:** Share ideas.

Lesson 3 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Record observations of different habitats, including similarities and differences. • Describe characteristics of a variety of habitats. • Describe some living things that live in different habitats.	• Habitat • Observations	• Student book • Pencils • Crayons • Chart paper or board • Markers

LIFE SKILLS
Learn to Be
Communication: • Good listening. • Reading, writing, non-verbal communication skills.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **In our last lesson, we talked about and observed the environment around the school. Your home assignment was to sit quietly at home and record on a piece of paper what you saw in your own environment. Please raise your hand if you would like to share what you observed at home.**

TEACHER DO: Choose two or three students to share what they observed.



2. TEACHER SAY: **Please open your student books to Our Environment. Yesterday you made notes here about the environment around the school. Take a few moments now to draw what you observed in your home environment on the bottom row. Try to remember what you saw, and do your best to record your observations.**

 STUDENTS DO: Record observations from the home environment.

TEACHER DO: Walk around the room, encouraging students to recall observations, and occasionally asking them to explain what they are drawing. Remind students of the categories used earlier: plants, animals, natural, and human-made items.

TEACHER SAY: **Now that you have finished your drawing, please share with your Shoulder Partner. Ask your partner to explain his or her drawing by pointing out plants, animals, natural, and human-made items to you. One of our vocabulary words is "environment." Please think about how your Shoulder Partner's environment is similar to yours and how it is different.**



 STUDENTS DO: Share drawings and discuss similarities and differences.

3. TEACHER SAY: **Today we will continue our study of different environments. We will learn**

about the animals and plants that live in different environments. First, let's learn a new vocabulary word. When we study how the local environment affects the plants and animals that live there, we use the word HABITAT. A habitat is the natural environment of plants and animals. Who can name a plant or animal that we can see near our school or home?

TEACHER DO: Choose four to five students with hands raised.

 **STUDENTS DO:** Share local plants or animals.

TEACHER SAY: Now, think about how we have drawn and described the local environment. What about an environment might affect the [plant/animal]? Use Think Time.

TEACHER DO: Use **Calling Sticks** to choose two or three students to explain how the habitat affects the plant or animal.

 **STUDENTS DO:** Share ideas.

TEACHER DO: Record student ideas about components that might affect life in a habitat. If students struggle to identify components, prompt them to consider temperature (it is hot, so animals might pant or find other ways to cool off), amount of rainfall (when it rains, there is more water to drink), food sources, or shelter (for example, some plants and animals need shade from the sun).

4. TEACHER SAY: These are very good ideas. The HABITAT supplies air, food, water, and shelter for living things. Let's look at a few habitats in your student book. Turn to the page, What Is in a Habitat? Please read the directions silently as I read them aloud.

 **READ ALOUD: Look at the pictures. Write what you see in the box next to each picture.**

 **STUDENTS DO:** Read along silently.

TEACHER SAY: Think about what you see. You may even infer something about the environment as long as you have evidence from the picture. Let's start with an example. In the second picture I see sunlight streaming into the water. I can infer the water is not very deep because of the sunlight. Now you try. Please write what you see in your student book.



 **STUDENTS DO:** Write what they see in the pictures.

Note to Teacher: Adjust this learning experience as necessary for individuals or groups of students. You may continue with responses from students if needed. If students have difficulty writing complete sentences, they may circle evidence in the photo and label each with words or phrases.

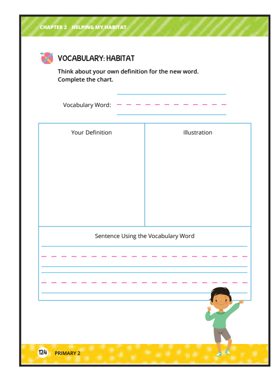
TEACHER SAY: Thank you for working hard to observe and record what you see. Turn to your Shoulder Partner to share what you have discovered. Did your partner see anything that you may have missed in the pictures?

 **STUDENTS DO:** Share work with a **Shoulder Partner**.

TEACHER DO: Lead a class discussion using questions such as the following. Throughout the conversation, emphasize the discovery that habitats provide what living things need to survive.

- When you talked with your partner, what differences did you find between your lists?
- What types of inferences did you make? (Make certain students give evidence from the pictures for any inferences.)
- When you looked at the pictures, did you discover any similarities? (Allow time for a significant discussion of what is similar among the pictures. Be sure not to overlook evidence of "air" since it is an important part of habitats.)
- Did you find any things that were human-made?
- Why do we consider human-made objects part of a habitat?
- Think about what living things need to survive. Can you identify any of these needs in the pictures?

Note to Teacher: This should be an open-ended discussion that will start students thinking about habitats and how plants and animals are affected by the world around them.



5. TEACHER SAY: Very good. You are learning so much about habitats. Our vocabulary word for today is HABITAT. Please turn in your student books to Vocabulary: Habitat. Review the directions as we wait for everyone to be ready.

 **STUDENTS DO:** Read directions and think about a definition.

TEACHER DO: Guide students through the vocabulary page. Begin by writing HABITAT on the board. Help students through the process of developing their own meanings by asking such questions as:

- How can we define the word habitat?
- What could we draw to represent a habitat?
- How can we use the word habitat in a sentence?

TEACHER DO: Walk around the room and help students complete the page. When everyone is finished, regain student attention with **Hands Up**.

6. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Thank you for making such good observations today as we learned about how a habitat provides what plants and animals need to survive. We will work more on this in the next few lessons. Perhaps tonight you could discuss with your family how the local environment affects how you live.

Lesson 4 Overview

LEARNING OUTCOMES

Students will:
- Research the natural environment of a plant or animal.
- Record information learned and the source of the information.

KEY VOCABULARY

- Dove
- Egret
- Goose/Geese
- Habitat

MATERIALS

- Student book
- Pencils
- Crayons
- Chart paper or board
- Markers
- Computers and internet access and/ or books for research

PREPARATION

Students will research during today's lesson. Make available internet access, age-appropriate articles, books, or regional videos that may help students learn about the animals found in the local community. You may consider supplying specific names of birds, butterflies, and other species that students can research. This would also be a good time to invite a community member to share information with students.

LIFE SKILLS

Learn to Live Together

Sharing:
- Effective management and organization of tasks.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Today we will review in a new way. We will do a routine called On the Fence. I will say a statement and you will decide if you agree or disagree. If you agree, you will move to the left side of the room. If you disagree, move to the right side. Then we will have a discussion. If you change your mind or your opinion, you may walk to the other side of the room. Let's try it. Everyone stand up at your seat.**

Note to Teacher: If there is not much room for this activity, you can have students that agree stand and those that disagree stay seated.

TEACHER SAY: **Which statement is correct? A planter can be a habitat for a plant.**

TEACHER DO: Remind students of how to vote "agree" and "disagree."

TEACHER SAY: **Is a planter a habitat? Go to the side you think is correct. Be prepared to explain your reasoning.**

 STUDENTS DO: Move to one side of the room to vote.

TEACHER DO: Choose three or four students to answer why they voted the way they did. Remind students to listen closely to their classmates. They can move from one side to another if a student persuades them to change their mind.

TEACHER SAY: **Yes, the planter is the habitat for the plant. The plant is dependent upon the planter for its food and water source, shelter, and the air around it. Let's try another one: All plants and animals need water. What do you think? Do you agree, or can you think of a plant or animal that does not need water to survive?**

 **STUDENTS DO:** Move to one side of the room to vote.

TEACHER DO: Choose students to share their reasoning and try to persuade others to their viewpoint. Prompt students to provide evidence.

TEACHER SAY: I appreciate that you gave evidence with your ideas. Thank you very much. That was a good way to review.

 **STUDENTS DO:** Return to their seats.

TEACHER SAY: We have been learning about environments and habitats. What is the difference between the two?

 **STUDENTS DO:** Share ideas.


CHAPTER 2 HELPING MY HABITAT
Lesson 4

BIRDS OF EGYPT

Read the information below. Think about and discuss the questions.

There are many species of birds in Egypt. Which birds live near you? In what habitat might the birds live?

The egret is also called the Farmer's Friend.

The voices of female and male Egyptian geese are different.

The dove is common to many parts of Egypt.

PRIMARY 2 125

2. TEACHER SAY: There are animals that come into the habitat from the environment. One of the animals we often see in a garden is a bird. There are many different species of birds in Egypt. There is a lot we can learn about birds. Let's turn to the next page, Birds of Egypt. Read the directions to yourselves once you find the page.

TEACHER DO: After students have read the directions, allow time to discuss in small groups.

- What do they already know about birds?
- What can they infer about where the birds live?
- The purpose of this page is to engage students to think about birds and other animals that may live in their area.

TEACHER SAY: I am curious after looking at these pictures. What are some of the names of birds that live in our area? What do they eat? What other animals can I learn about in our environment? I wonder. What questions do you have?

 **STUDENTS DO:** Share questions they have at this time.

3. TEACHER SAY: We know that plants and animals live in habitats. What are some things that plants and animals need to survive in a habitat?

TEACHER DO: Use **Calling Sticks** to gather ideas and write them on the board/chart paper. Make one column for PLANTS and one column for ANIMALS.

 **STUDENTS DO:** Share ideas.

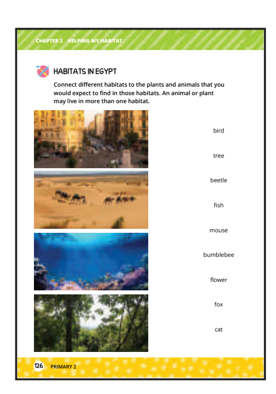
Note to Teacher: Compile as complete a list as possible, such as air (or water) to breathe, food to eat, water to drink, warmth, sunshine, shelter. If both plants and animals need something, list it in both columns. The students should discover the similarities. This may be review for students from Primary 1.

TEACHER SAY: Thank you for helping list what plants and animals need to survive. From what we have learned so far in the chapter, where do you think plants and animals get these things?

TEACHER DO: Call on students with raised hands. Guide discussion toward "from their habitat."

TEACHER SAY: So if plants and animals get what they need to survive from their habitat, the habitat is very important, is it not? Thumbs Up if you agree that the habitat is important for plants and animals.

 **STUDENTS DO:** Respond.


CHAPTER 2 HELPING MY HABITAT

HABITATS IN EGYPT

Connect different habitats to the plants and animals that you would expect to find in those habitats. An animal or plant may live in more than one habitat.

bird
tree
beetle
fish
mouse
bumblebee
flower
fox
cat

126 PRIMARY 2

4. TEACHER SAY: You are learning a lot about how important the habitat is. I wonder if different habitats support different types of plants and animals. Let's see what you already know. Please turn in your student book to Habitats in Egypt. Read along silently as I read the directions aloud.

READ ALOUD: Connect different habitats to the plants and animals that you would expect to find in those habitats. An animal or plant may live in more than one habitat.

TEACHER SAY: Work together with your Shoulder Partner to connect the habitats with the animals and plants listed. You may decide that an animal or a plant could live in more than one habitat.



STUDENTS DO: Work together to decide which animals and plants live in which habitats.

TEACHER DO: Once students have completed the page, check for understanding by asking students to raise hands in response to where the animals may live. For example, ask: How many of you think you will find a bird in the desert? In the ocean? In the city? Guide students to discuss their reasoning for raising hands to vote.

5. TEACHER SAY: We have begun to think about the plants and animals in habitats. Let's learn more about the plants or animals we want to help for our Share project. We will research to learn what plants or animals in our local environment need, so we can think about how to help them. Turn to the next page in your student book, Research Notes. Follow along as I read the directions.

READ ALOUD: Choose a local animal to research. Write three important facts that will help you in your Share project.

TEACHER DO: Direct students to research animals within the local environment, providing a list to choose from if needed. Give specific directions about how you want students to conduct research based on the resources available. If conducting internet research, review safety expectations. Guide students to complete the page, Research Notes, by writing the name of the animal, three important facts about the animal's habitat, and where they found the information (for example, the website or book title).





STUDENTS DO: Research local animals.

6. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Let's close our lesson by sharing something you learned today that surprised you. Share with your Shoulder Partner.



STUDENTS DO: Listen to each other's learning.

Lesson 5 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Describe Egypt using a satellite image. • Explain impact on living things when environments change. • Identify ways in which people can influence local environments.	• Aswan High Dam • Dam • Pollution • Satellite • Steward	• Student book • Pencils • Crayons • Chart paper or board • Markers

PREPARATION

For the dam demonstration: Use a box (plastic will be more durable, but cardboard can be used once or twice), approximately 10 cm x 30 cm x 2.5 cm to contain the demonstration. The riverbed can be modeled using two paper towel rolls cut in half lengthwise, one for the riverbed upstream from the dam and one for the riverbed below the dam. These should be secured (possibly with glue) to the box, open end up. Tilt the box slightly and slowly to pour water into one of the channels, with the dam closed. Demonstrate how to control the flow of water by opening and closing the dam. A lake can be formed upstream by keeping the dam closed until that half of the box is filled. It will flow over the riverbed (paper towel roll).

Students will need recyclable materials to complete the Share project. At the end of class, invite students to bring in building materials for the upcoming engineering project. Suggest clean recyclable materials, such as cardboard and plastic. Tape, rubber bands, and string will also be helpful.

LIFE SKILLS

Learn to Know

Critical Thinking:
- Define relationships between different objects.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **During our last lesson, we talked about plants and animals in Egypt and the habitats in which they live. Do you think habitats ever change? If yes, please raise your hand and give an example.**

 STUDENTS DO: Volunteer to share ideas.

Note to Teacher: The most common examples are likely to be weather-related. While this is not strictly a change in habitat, it is okay for now because the important point is for students to think critically about their surroundings. If students are unable to give examples, share your own.

TEACHER SAY: **What do you think would happen to the plants and animals near here if our local habitat changed?**

TEACHER DO: Use **Calling Sticks** to start the discussion. Promote as much discussion on this topic as possible. It is the important idea in this lesson.



STUDENTS DO: Share ideas.

TEACHER SAY: **These are very good ideas. Let's turn in your student books to the story we read called In the Garden. Please take a moment to review the story.**

STUDENTS DO: Review the story.

TEACHER DO: Lead a discussion around the following points:

- We are discussing how habitats can change. Did Hossam and Nour make any changes to the garden habitat?
- Did the characters' actions have an impact on any plants in the garden? On any animals?
- We have discussed that changing the local habitat can have a large impact on plants and animals. Can you think of ways that people change the local habitat?

2. TEACHER SAY: **You have very good ideas. We know many ways that people can change the local habitat. Some changes help the plants and animals in the habitat. Other changes may cause problems. Some changes can even be good and harmful at the same time. Please open your student books to the page, .**



READ ALOUD: **Look at the picture. What do you notice?**

TEACHER DO: Choose students with raised hands.



STUDENTS DO: Share ideas.

TEACHER DO: After students share answers, explain that the image is a satellite picture of Egypt. Ask students if anyone has heard of a satellite before, and, if possible have one or two students share any prior knowledge of satellites.

3. TEACHER SAY: **A satellite is a camera in space—high above the Earth—that can take pictures of stars and galaxies like we learned about in the last chapter. A satellite can also take pictures of the Earth, like this one. This is a picture of Egypt taken from space. Now that you know this is Egypt, what do you see?**



STUDENTS DO: Share observations.

TEACHER SAY: **We have looked at maps of Egypt before, but this is a real picture. Let's learn more. Find the Nile River. Show your Shoulder Partner the Nile.**



STUDENTS DO: Find the river in the picture.

TEACHER SAY: **Trace the river in the picture with your finger from the top to the bottom.**



STUDENTS DO: Trace the river with fingers.

TEACHER SAY: **How does the river look different at the top and bottom of the satellite image?**

TEACHER DO: Use **Calling Sticks** for two or three ideas. Students may notice the different colors (green near the river), and how the river changes in color and shape near the bottom of the photo.



STUDENTS DO: Share ideas.

TEACHER SAY: **You have very good ideas. I wonder if you know which direction the Nile River flows. With your hand over the picture, point the direction you think it flows.**



STUDENTS DO: Point to guess or vote.

TEACHER SAY: **Keep in mind as we do our work together that the river flows from the bottom of the picture toward the top. Now, please raise your hand if you know what a river dam is.**



STUDENTS DO: Share ideas.

4. TEACHER SAY: **Thumbs Up if you have ever seen a river dam in person.**

 **STUDENTS DO:** Respond as appropriate with **Thumbs Up**.

Note to Teacher: If students do not know what a river dam is, that is okay. You will explain it using the photograph and optional demonstration.

TEACHER SAY: **Sometimes, people decide that they need to control the flow of water in a river. I wonder why people would want to control the flow of water in a river. What do you think?**

TEACHER DO: Use **Calling Sticks** to call on two or three students.

TEACHER SAY: **Thank you for helping us think about why people might want to control the flow of water in a river. One important reason people want to control water in a river is to stop flooding.**

TEACHER DO: If a demonstration is available, tell students you have made a **model** of a dam to help them understand. Demonstrate using the dam **model**.

TEACHER SAY: **The barrier across the water can be opened and closed. This allows people to control how much water passes through. This barrier is called a dam. Next to the image of Egypt and the Nile River in your student book, please write two reasons why people build river dams.**

TEACHER DO: Allow students time to write two reasons in the student book. Guide as necessary.

 **STUDENTS DO:** Write two reasons in the student book.

5. TEACHER SAY: **One famous dam in Egypt is called the Aswan High Dam. It is a dam on the Nile River. Find the Aswan High Dam on the Nile River in the picture.**

TEACHER DO: Write "Aswan High Dam" on the board/chart paper so the students know what to look for in the picture.

TEACHER SAY: **Study the picture carefully. Together with your Shoulder Partner, discuss what the Nile River looks like above and below the Aswan High Dam.**

TEACHER DO: Allow several minutes for the students to discuss. Walk around the room, pointing out the areas above and below the dam in the picture.



 **STUDENTS DO:** Discuss differences they see in the picture.

TEACHER SAY: **Remember which way we said the Nile River flows. With your Shoulder Partner, point to the side of the river that is behind the dam. That is where the water is coming from. Discuss with each other what is behind the dam.**

 **STUDENTS DO:** Study the picture and look at the land and water behind the dam.

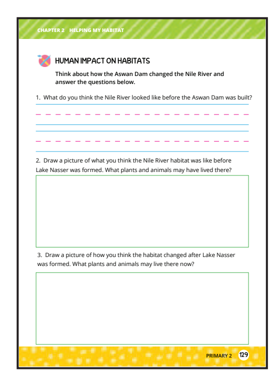
TEACHER DO: Use **Calling Sticks** to choose students to share observations until one points out Lake Nasser.

TEACHER SAY: **Very good. Lake Nasser was formed when the Aswan High Dam was built. Before the Aswan High Dam, there was no Lake Nasser, and the river flooded annually. Remember our festival, Wafaa El-Nil? It celebrates the annual flooding cycle of the Nile River. The river no longer floods, because we control the flow of water. Now, take some Think Time. How have humans changed the Nile River?**

 **STUDENTS DO:** Use **Think Time**, then offer ideas.

TEACHER SAY: **Please write in your student books one or two ways that humans have changed the Nile River by building the Aswan High Dam.**

TEACHER DO: Give the students at least five minutes to write ideas in the student books.


CHAPTER 2 HELPING MY HABITAT

HUMAN IMPACT ON HABITATS

Think about how the Aswan Dam changed the Nile River and answer the questions below.

1. What do you think the Nile River looked like before the Aswan Dam was built?

2. Draw a picture of what you think the Nile River habitat was like before Lake Nasser was formed. What plants and animals may have lived there?

3. Draw a picture of how you think the habitat changed after Lake Nasser was formed. What plants and animals may live there now?

PRIMARY 2 129

6. TEACHER SAY: Please turn to the page labeled Human Impact on Habitats in your student books. Discuss the questions with your Shoulder Partner, and then complete the answers in your own book.

TEACHER DO: Allow students sufficient time to discuss and think.

 **STUDENTS DO:** Discuss with **Shoulder Partner**, and then write answers.

Note to Teacher: This is the most difficult part of the activity, as the students must synthesize several ideas. Read the questions out loud one at a time for students to discuss and answer if needed.

TEACHER SAY: Let's talk about these ideas together. What do you think the Nile River looked like before the Aswan High Dam was built?

TEACHER DO: Use **Calling Sticks** to encourage discussion.

 **STUDENTS DO:** Share ideas.

TEACHER SAY: Thank you, these are good ideas. Before the dam was built, the river behind the dam looked very much like the river in front of the dam looks now. The building of the dam flooded the area behind the dam and created Lake Nasser. Let's think about how this might have changed the habitat. We will use Think Time and then share ideas.

TEACHER DO: Use **Calling Sticks** to encourage discussion.



STUDENTS DO: Share ideas.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Let's close by getting together in our table groups to discuss ways people can affect the environment. Please choose a group leader.

 **STUDENTS DO:** Choose a leader in each table group.

TEACHER SAY: Group leader, please make sure everyone gets a chance to share ideas. How can people affect the environment?

Note to Teacher: To gather enough building materials for the upcoming engineering project, ask the students to bring in materials from home. Suggest clean recyclable materials, such as cardboard and plastic. Tape, rubber bands, and string will also be helpful.

Lesson 6 Overview

LEARNING OUTCOMES

Students will:
- Research ways to attract wildlife.
- Describe how characters in a story respond to challenges.

PREPARATION

On a table, place labeled boxes that identify the materials you want students to bring from home, such as plastic, cardboard, string, and wire. The students will place materials in the labeled boxes upon arrival in the classroom.

Students will research during today's lesson. Make available internet access, books, or regional videos that may help students learn about the animals that may be found in their community. You may consider supplying specific names of birds, butterflies, and other species that students can research. This would also be a good time to invite a community member to share information with students.

KEY VOCABULARY

- Attract
- Wildlife

MATERIALS

- Student book
- Pencils
- Crayons
- Chart paper or board
- Markers

LIFE SKILLS

Learn to Work	Learn to Live Together
Productivity: • Setting clear goals.	Sharing: • Effective management and organization of tasks.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **We have been discussing plants and animals and their habitats. We have discussed ways habitats support plants and animals. We have even talked about how people impact habitats. Let's share two ways people impact habitats.**

TEACHER DO: Use Calling Sticks to choose two or three students to respond.

2. TEACHER SAY: **Because humans are able to have such a big impact on the habitats of plants and animals, we must be careful when we make changes to the environment. We must take care of the environment because we all live here. Remember the story about Nour and Hossam in the garden. How did they help the plants?**



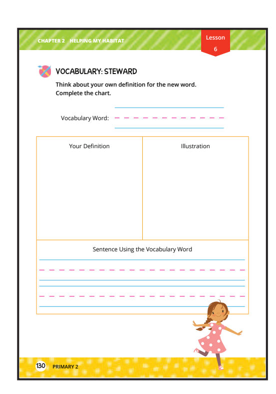
STUDENTS DO: Share ideas.

TEACHER SAY: **Hossam is a steward of his garden. Someone who takes care of the environment is called a STEWARD. When have you been a steward for your environment?**



STUDENTS DO: Share experiences.

TEACHER SAY: **I am proud of you for being stewards. Please turn to the page labeled Vocabulary: Steward in your student book so we remember this important vocabulary word.**



TEACHER DO: Guide students as needed to complete the page.


STUDENTS DO: Complete page with some direction.

TEACHER SAY: Thank you for completing your chart. Take time to share your work with your Shoulder Partner.

3. TEACHER SAY: Now that you are thinking about being a steward of our environment, let's read a story about our friends. Turn to the page Being a Good Steward. Please read the story aloud in your groups. Group leader, start by reading the first sentence. Then the person to the left reads the next sentence. Keep going in this way until the story is finished. Be sure to follow along as others read aloud and be ready to read aloud when it is your turn. If you do not know a word, your group will help you.

 **STUDENTS DO:** Read the story in groups, helping each other as needed.

TEACHER DO: Allow time for all groups to finish reading. If you wish, you may want to read the story for the entire class as a review and to build on the group reading practice. Bring students back together for a discussion. Lead a discussion around questions such as:

- What does Hossam tell Nour as they walk to school?
- What will happen if Hossam is not able to water his plants regularly? Use inference and explain why.
- How does Nour want to help Hossam?

TEACHER SAY: It seems that Nour has steps to help Hossam. Let's repeat the steps in order. Be sure to explain each step. We will Popcorn the steps.

TEACHER DO: Use **Calling Sticks** to select a student to begin the **Popcorn**.

 **STUDENTS DO:** Respond with the steps in order.

TEACHER SAY: What is the name of this process? Look at the picture in your student books when you think about your answer.

 **STUDENTS DO:** Answer, engineering design process.

TEACHER SAY: Our Share project is to design something to help an animal that lives in our environment. How do you think the engineering design process will help us?

 **STUDENTS DO:** Share ideas.

4. TEACHER SAY: You did research a few days ago about an animal in our local environment. Think about what you could do to help this animal.

 **STUDENTS DO:** Share ideas.

TEACHER SAY: Let's think about one option together. At the end of our garden story, Hossam smiles as he watches a butterfly. Does anyone know what attracts butterflies to a garden?

 **STUDENTS DO:** Share ideas.

TEACHER SAY: I think we need to research to make sure we are correct. What about the birds that visited Hossam's garden? What can we do to attract birds?

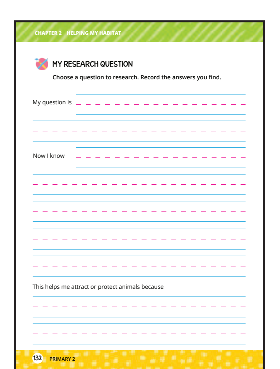
 **STUDENTS DO:** Share ideas.

TEACHER SAY: You have good ideas, but let's research this as well. What questions do you have about helping animals? Let's write some of our questions on the board. We can help each other that way.

TEACHER DO: Record some of the questions students have. If needed, add some additional questions such as: What plants attract bees? What kind of shelter do animals need? What do the animals eat?



STUDENTS DO: Share questions.


CHAPTER 2 HELPING MY HABITAT

MY RESEARCH QUESTION

Choose a question to research. Record the answers you find.

My question is

Now I know

This helps me attract or protect animals because

132 PRIMARY 2

TEACHER SAY: We have lots of questions. Let's work in teams to see if we can find answers.

5. TEACHER DO: Choose teams for researching. Students can also work alone if needed. Give specific instructions based on available resources.

TEACHER SAY: We have a page in our student book that will help us stay organized. Please turn to My Research Question. Follow along as I read the directions and the sentence starters on the page.



READ ALOUD: Choose a question to research. Record the answers you find. My question is _____. Now I know _____. This helps me attract or protect animals because_____.

TEACHER SAY: Think about the sentence starters. Talk to your Shoulder Partner. What will you need to learn to complete the sentences?



STUDENTS DO: Explain to **Shoulder Partner**.

TEACHER SAY: Now it is your turn to work. If you need help, raise your hand.





STUDENTS DO: Conduct research in small groups.

6. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Let's Hand Up, Pair Up and find a new partner. Share with your new partner what you learned in your research.



STUDENTS DO: Share with new partner.

TEACHER DO: Walk around and listen to students' discussions. When appropriate, direct students to thank their partner and return to their seats to clean up for the day.

Lesson 7 Overview

LEARNING OUTCOMES

Students will:
- Apply steps of engineering design.
- Use the engineering design process to plan a product to help the environment.

PREPARATION

As in the previous lesson, the students will place materials in the labeled boxes upon arrival in the classroom. Choose the ideal group size for your classroom (3, 4, or 5 students).

Students should have access to rulers for today's lesson.

KEY VOCABULARY

- Engineering design process (EDP)
- Process
- Product
- Recyclable

MATERIALS

- Student book
- Pencils
- Crayons
- Chart paper or board
- Markers
- Rulers
- Paper

LIFE SKILLS

Learn to Know	Learn to Work
Critical Thinking: • Differentiate between reality and imagination. Problem-Solving: • Analyze the parts of the problem.	Collaboration: • Respect for other opinions.



Learn (90 minutes)

Directions

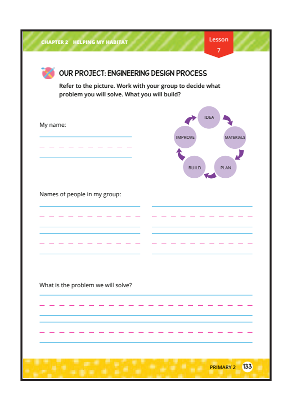
1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **In our last lesson, we thought about ways that we can be good stewards of the environment. What were some things you learned in your research about how to help or protect animals?**



STUDENTS DO: Share ideas.

2. TEACHER SAY: **These are all very good ideas. In our last lesson, we also introduced the engineering design process (EDP). Today, we will use the EDP to make something to help a plant or animal live in its habitat. First, we must form project groups.**



TEACHER DO: Organize students in project groups.

3. TEACHER SAY: **Now you will begin your project using the engineering design process. Please turn to the page called Our Project: Engineering Design Process, in your student books.**



READ ALOUD: **Refer to the picture. Work with your group to decide what problem you will solve. What you will build?**



STUDENTS DO: Follow along as the teacher reads.

TEACHER SAY: **To begin, please write your name in the space labeled "My name." Write the names of your group members below in the spaces labeled "Names of people in my group."**

STUDENTS DO: Write the name of each team member in their own book.

TEACHER SAY: Please look at the picture in your student book. It should look familiar. This picture shows the series of steps we call the engineering design process. Who can describe the process? Use the picture to help you.



STUDENTS DO: Describe the steps of the EDP.

Note to Teacher: The important ideas are 1) a product is made to solve a problem; 2) we typically begin with ideas; and 3) the steps in the process form a circle because there are always more ways to improve ideas. In principle, the process can continue as many times as is required to continue to improve the product.

TEACHER DO: Allow plenty of time for this discussion, as it is the foundation for the engineering project.

TEACHER SAY: Why do you think a series of steps, or a process, is important for building things?

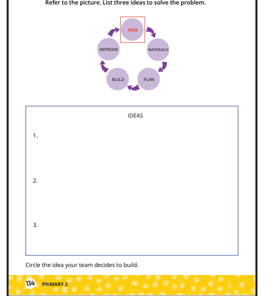
TEACHER DO: Allow time for sharing ideas, guiding the discussion toward ideas that are centered on efficiency (though students may not use that word), such as: you need to know what you are building, you need to know what materials to use, you need to know how much it will cost, or maybe there is a time limit.

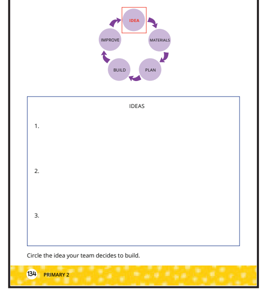
TEACHER SAY: We began today by discussing ideas to help an animal live in its habitat. Please talk with the members in your group to share a problem the animal you researched faces. As a group, decide on one problem that you would like to help solve. Please write the problem in your student book once you have decided.

TEACHER DO: Allow a few minutes for discussion and writing in the book.



STUDENTS DO: Discuss the problem and record it in the student book.







Note to Teacher: Decomposing a problem into parts and analyzing parts of the problem is an important computational thinking skill. In early grades, students can focus on breaking down simple problems, and the engineering design process helps them do this in a systematic way. As students gain experience in applying the EDP, encourage them to break down or decompose the steps for larger problems.

4. TEACHER SAY: When you are certain that everyone in your group agrees on the problem you would like to solve, please turn to Our Project: Idea in your student book. Now we will use Think Time. Take a moment and quietly think of ways to solve the problem. Use your imagination.



STUDENTS DO: Think about ways to solve the problem.

TEACHER DO: Allow students time to think independently; then regain their attention with **Hands Up**.

Note to Teacher: Ideally, student creativity will drive progress throughout the Share project. If students are struggling to think of ideas, ***Model*** *or* ***Think Aloud*** *each step of the EDP with an example, such as building a container to capture rain and/or hold water for birds to drink and clean themselves (a bird bath).*

TEACHER SAY: Now that you have had a moment to imagine, please share your ideas with your group.



STUDENTS DO: Share imagined solutions with their groups.

TEACHER DO: Walk around the room, listening to the ideas. Encourage students to use their imaginations. All ideas are important in this step.

TEACHER SAY: Now that you have shared ideas with your group members, write your three favorite ideas in your student book in the box labeled "Ideas." It is okay if you and your group members write the same or different ideas.



STUDENTS DO: Write down their three favorite ideas.

TEACHER DO: Allow several minutes for the students to write their three favorite ideas. It is all right if they continue to discuss with their group members. This step is meant to encourage as much creativity as possible.

TEACHER SAY: Please take turns reading your three favorite ideas to each other. If someone else reads an idea on your list, put a check mark by it. If someone else says it again, add another check mark.



STUDENTS DO: Share three favorite ideas, putting check marks by an idea each time it is mentioned.

TEACHER SAY: Now as a group, you must decide which idea to pursue. You may wish to vote on which idea to use. Which ideas have the most check marks? This might be another way to help you decide. Be sure to allow everyone a chance to say what they think. Please be respectful of the students in your group.



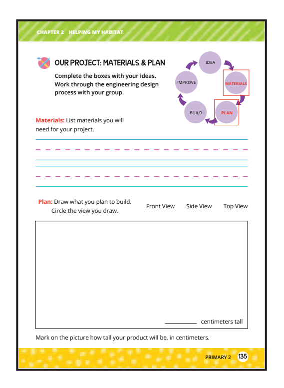


STUDENTS DO: Come to consensus on which ideas to pursue.

TEACHER DO: Allow enough time for students to come to consensus. Walk around the room, encouraging and reminding students to be respectful.

5. TEACHER SAY: Thank you for sharing your IDEAS so nicely with each other. Looking at the picture in your student book, what is the next step?

TEACHER DO: Use **Calling Sticks** to choose students. Response should be: Materials.


CHAPTER 2 HELPING MY HABITAT

OUR PROJECT: MATERIALS & PLAN

Complete the boxes with your ideas. Work through the engineering design process with your group.

Materials: List materials you will need for your project.

Plan: Draw what you plan to build. Circle the view you draw.

Front View Side View Top View

centimeters tall

Mark on the picture how tall your product will be, in centimeters.

PRIMARY 2 135

TEACHER SAY: Yes, MATERIALS is next. Please turn to Our Project: Materials & Plan in your student book. Now we must consider what materials are available to us. We will be using the recyclable materials that you brought from home.

TEACHER DO: Allow students a moment to view and consider the various materials. Prompt groups to discuss what materials are needed to build their product. If you have introduced an example such as the bird bath, **Think Aloud** the materials you would need and list them on the board or chart paper.



STUDENTS DO: View and discuss what materials they will need.

TEACHER SAY: Please make a list of the materials you will need in your student book. If you need something that you did not see, make a note to try to bring it from home.



STUDENTS DO: Write list of materials.

6. TEACHER SAY: Very good. The next step in the engineering design process is PLAN. This can be a fun step, because you get to draw. The drawings are sometimes more than just a simple sketch. Sometimes we want to look at an object from different sides, or views. Please turn to the page in your student book called My Pencil.



READ ALOUD: Draw your pencil from three different views in the boxes below.



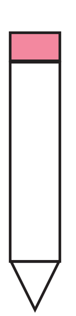
TEACHER SAY: We will use this page to practice how to draw an object from different sides, or views. Let's start by looking at our pencil from different directions. One important reminder: We will draw what we see. We might think, "I know what a pencil looks like, and can draw it from memory or imagination." The point of this task is to draw exactly what we see. First, hold up your pencil to look at it from the side.

TEACHER DO: **Model** holding the pencil, looking at it from the side.



STUDENTS DO: Hold pencils to mimic the teacher.

TEACHER SAY: Please draw what you see in the box labeled "Side View."



TEACHER DO: Give the students a moment to get started. When everyone is busy drawing, make a very simple drawing on the board of a pencil from the side.

TEACHER SAY: This is called a SIDE VIEW, because I was looking at my pencil from the side. Thumbs Up if your drawing looks like mine.

 **STUDENTS DO:** Compare drawings to the teacher's and show **Thumbs Up**.

TEACHER SAY: Let's try a different view. A pencil might look different from a different direction. Now look down on your pencil from the top.

TEACHER DO: **Model** holding the pencil, looking at it from the top.

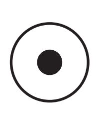
TEACHER SAY: Please draw what you see in the box labeled "Top View."

TEACHER DO: Give the students a moment to get started. When everyone is busy drawing, make a very simple drawing on the board of a pencil from the top.

 **STUDENTS DO:** Draw pencils from the top view.

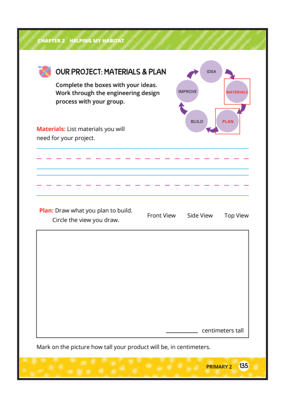
TEACHER SAY: This is called a TOP VIEW. It looks so different. Things often look very different when you look at them from different directions. Thumbs Up if your drawing of the top view of your pencil looks like mine.

 **STUDENTS DO:** Compare drawings to the teacher's and show **Thumbs Up**.



TEACHER DO: Repeat the process of **model**ing, looking, and drawing pencils from the bottom. Give students time to draw and compare.

 **STUDENTS DO:** Draw pencils from the bottom view.



CHAPTER 2 HELPING MY HABITAT

OUR PROJECT: MATERIALS & PLAN

Complete the boxes with your ideas. Work through the engineering design process with your group.

IDEA
MATERIALS
PLAN
BUILD
IMPROVE

Materials: List materials you will need for your project.

Plan: Draw what you plan to build. Circle the view you draw.

Front View Side View Top View

_____ centimeters tall

Mark on the picture how tall your product will be, in centimeters.

PRIMARY 2 135

TEACHER SAY: Very good. Now, let's take what we have learned and draw the product you will build. Please turn back to the page called Our Project: Materials & Plan, in your student book. In your project group, decide together who will draw which view of the product you plan to build. Who will draw the view from the top? The side? The front?

 **STUDENTS DO:** Agree who will draw each view.

TEACHER SAY: When you know which view of your product you will draw, think about how you will begin to draw. Ask yourself: What shapes will I need? How do they connect together? When you are ready to draw, you may begin.

TEACHER DO: Allow five to ten minutes for the students to draw. Walk around the room, helping the students understand how to draw the different views.

TEACHER SAY: Everyone is doing a very good job drawing their products. We must do one more thing before we are finished with the step called PLAN. You must decide how big your product will be. Using your ruler, please discuss with your group how tall your product will be. When you have decided, write the number of centimeters in your student book, under your drawing. This will help you when you begin to build your product.

 **STUDENTS DO:** Discuss and agree on how tall the products will be. Write size in centimeters in student book.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: You are all doing a very good job. Please choose a group leader for our closing discussion.

 **STUDENTS DO:** Choose leaders in project groups.

TEACHER SAY: Group leaders, please lead a discussion on what we learned today about the

engineering design process. Please make sure that everyone is polite and that everyone gets a chance to speak.

 **STUDENTS DO:** Discuss what was learned.

TEACHER DO: Allow about 10 minutes for discussion. Walk around the room, complimenting the students on their discussions.

TEACHER SAY: **Thank you for all of your work today. You are learning the engineering design process. Tomorrow you will build your product. Please remember to bring in more recyclable materials from home. You will use them to build your product.**

Lesson 8 Overview

LEARNING OUTCOMES

Students will:
- Use the engineering design process to build a product to help the environment.
- Collaborate respectfully to complete a task.

PREPARATION

As in the previous lesson, the students will place materials brought from home in boxes according to the labels.

Students should have access to rulers and scissors for this activity.

MATERIALS

- Recyclable materials and other small items
- Tape, glue, string, rubber bands (for fastening)
- Paper (cardstock, if available)
- Scissors
- Rulers
- Pencils
- Paper
- Student book

LIFE SKILLS

Learn to Live Together

Sharing:
- Effective management and organization of tasks.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **During our last session we began using the engineering design process. What is the engineering design process used for?**

TEACHER DO: Use Calling Sticks to invite the students into the discussion.

 STUDENTS DO: Share ideas.

2. TEACHER SAY: **Please get in your project groups and take your student books with you.**

 STUDENTS DO: Regroup in project groups.

TEACHER SAY: **We have completed the first three steps (idea, materials, and plan) in the engineering design process. What is the next step?**



TEACHER DO: Use Calling Sticks until the answer BUILD is given.

TEACHER SAY: **Please turn to the page called Our Project: Materials & Plan in your student books.**

 STUDENTS DO: Turn to correct page.

3. TEACHER SAY: **Very good. You will need to refer to this page as you build your product. Last time, you drew a plan of what to build. Everyone drew a different view of the product. Now, please discuss HOW to build your product. Review your list of materials on the previous page. What will the outside be made of? How will the pieces be held together?**

 STUDENTS DO: Discuss in project groups.

TEACHER DO: Allow at least five minutes for the students to study their drawings. Walk around

the room, and when student groups are ready, allow them to collect the materials they need, one group at a time.

Note to Teacher: Monitor this step carefully to ensure that the students take only what they have written on the materials list. As the building starts, they may ask for more materials, but it is important to stress that they are only permitted to take what they are going to use. Impress upon them that wasting materials is not good practice.

TEACHER SAY: **Once you have your building materials, you may begin the BUILD step of the engineering design process. Please be respectful of other people in your group and work together.**

TEACHER DO: Allow time to build the product. Adjust time and provide support as needed. Periodically call for all students' attention in order to praise a group for working well together, have students **Brainstorm** solutions to a challenge one group encounters, or provide brief progress or process updates on the build session. Have students record challenges encountered and solutions devised on the student book page Our Project: Build.



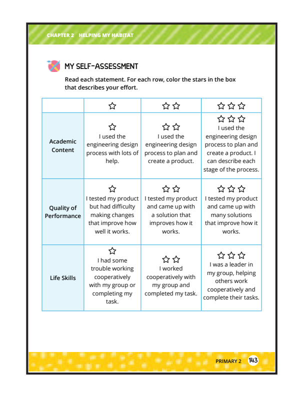

STUDENTS DO: Create the product.

Note to Teacher: The building process may take the remainder of the period; however, groups will finish building at different times. If some groups finish early, they may begin testing their product and making small improvements. (See Lesson 9 for more context.)

4. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: **Thank you for working so hard on your projects today. In our next lesson, you will have time to finish building if you need it. Please clean up your areas for today.**

TEACHER DO: Allow time for students to clean up their materials. Then lead closing by reviewing the rubric.


CHAPTER 2 HELPING MY HABITAT

MY SELF-ASSESSMENT

Read each statement. For each row, color the stars in the box that describes your effort.

	☆	☆☆	☆☆☆
Academic Content	☆ I used the engineering design process with lots of help.	☆☆ I used the engineering design process to plan and create a product.	☆☆☆ I used the engineering design process to plan and create a product. I can describe each stage of the process.
Quality of Performance	☆ I tested my product but had difficulty making changes that improve how well it works.	☆☆ I tested my product and came up with a solution that improves how it works.	☆☆☆ I tested my product and came up with many solutions that improve how it works.
Life Skills	☆ I had some trouble working cooperatively with my group or completing my task.	☆☆ I worked cooperatively with my group and completed my task.	☆☆☆ I was a leader in my group, helping others work cooperatively and complete their tasks.

PRIMARY 2 143

Note to Teacher: The Self-assessment is located at the end of the chapter. Provide assistance to make sure students find the page correctly.

TEACHER SAY: **Let's look at our rubric to make sure we are including everything we need for our Share project. Please turn to My Self-Assessment in your student book.**

TEACHER DO: Review the rubric, focusing on the second column as describing the work that will meet expectations. Answer any questions.

TEACHER SAY: **I look forward to seeing your projects. Thank your team before we end our lesson.**

Lesson 9 Overview

LEARNING OUTCOMES
Students will: • Use the engineering design process to test and improve their product to help the environment. • Listen and respond to others' ideas.

PREPARATION
As in the previous lesson, have students place materials from home in labeled boxes upon arrival in the classroom. Students should have access to rulers and scissors for this activity. Recreate the table below on the board/chart paper for the experiment section of the lesson. You can also leave the question and measurements blank to allow for student ideas to drive the example.

KEY VOCABULARY
• Engineering design process • Measurement

LIFE SKILLS
Learn to Live Together
Sharing: • Effective management and organization of tasks.

MATERIALS
• Recyclable materials and other small items • Tape, glue, string, rubber bands (for fastening) • Paper (cardstock, if available) • Scissors • Rulers • Pencils • Paper • Student book

My product: **Bird Bath**	
How will you test your product? (must be a measurement) **How much does it leak?**	
Measurement 1:	1 paper towel to clean up
Measurement 2:	2 paper towels to clean up
Measurement 3:	1 paper towel to clean up



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: What part of the engineering design process were we doing yesterday?

TEACHER DO: Choose a student to respond.

TEACHER SAY: If some groups need more time to build, that is fine. Let's take a moment to discuss the next step so that groups can move on when they are ready. What is the next step in the engineering design process after BUILD?



STUDENTS DO: Respond (Improve).

2. TEACHER SAY: Good. We want to know if our product works. Then we may need to make improvements. Turn to the page Our Project: Test. If I were making a container to hold water for birds, like a bird bath, what do you think I might want to test?



STUDENTS DO: Share ideas.

TEACHER DO: Collect and respond to ideas. If you recreated the table shown in the lesson preparation section, **Model** for students either through description or demonstration how you might test whether your container leaks.

TEACHER SAY: When we break into groups for the day, your first task will be to finish

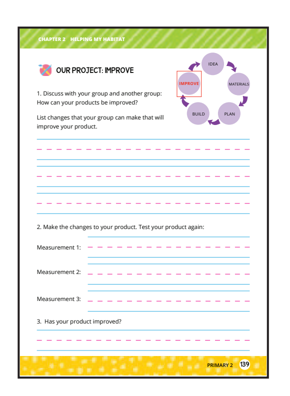
building if you are not yet finished. Since we might all finish at different times, take a few minutes now to think on your own about one way you could test your product.



STUDENTS DO: Use Think Time.

TEACHER SAY: **When your group is finished building, agree on one way to test your product, then conduct the test and take notes on the page Our Project: Test. When you finish testing, raise your hands and I will show you the next step.**

TEACHER DO: Support students as they finish building and begin to test. The testing process should involve a quantitative measurement. Groups may need help figuring out what to measure in the test or how to record notes.



CHAPTER 2 HELPING MY HABITAT

OUR PROJECT: IMPROVE

1. Discuss with your group and another group: How can your products be improved?

List changes that your group can make that will improve your product.

2. Make the changes to your product. Test your product again:

Measurement 1:

Measurement 2:

Measurement 3:

3. Has your product improved?

PRIMARY 2 139



Note to Teacher: Once groups have concluded their tests, encourage them to assess the results by responding to the prompts in the student book: Did your product work as planned? Describe any problems that your product had.

TEACHER DO: As groups signal that they are finished testing, have them turn to Our Project: Improve. Pair two groups together and have them explain their product to the other group. The groups can share ideas on how to improve the products.

3. TEACHER SAY: **You have done a great job of building your products and testing them. Thank you for sharing your product and ideas with other groups. Now it is time to make changes to your product to IMPROVE the design.**



STUDENTS DO: Implement changes to improve the product.

TEACHER DO: Allow students time to implement changes.

TEACHER SAY: **You have been very good engineers. Now please clean up your materials and return to your regular seats.**



STUDENTS DO: Clean up and return to seats.

4. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: **You did very well using the engineering design process. At your tables, please discuss how your project group worked together to solve problems.**



STUDENTS DO: Discuss experiences.

TEACHER SAY: **Thank you for working so hard on your products. Now you know how to use the engineering design process to build a product. I wonder if you might try to build something at home.**

Lesson 10 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Analyze writing to identify persuasion. • Write a persuasive letter expressing an opinion and supplying reasons for that opinion. • Reflect and self-assess own progress in learning.	• Persuade • Measurement	• Product • Student book • Pencils

LIFE SKILLS
Learn to Be
Accountability: • Provide effective feedback.



Share (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: Let's think about the products you and your team made. Talk with your Shoulder Partner. How does your product help a local animal?

 **STUDENTS DO:** Share products.

2. TEACHER SAY: Let's check in with our friend Nour, who has also created a product. Nour has sent a letter to her family to persuade them to use the watering system she made for Hossam. Let's read it. Turn to the next page in the student book, A Letter from Nour.

 **READ ALOUD: Read the story. How does Nour persuade her family to build a watering system?**

TEACHER SAY: There is a word here that I wonder about. What does the word PERSUADE mean?

Note to Teacher: Choose any students who think they may know. It is okay if they do not yet know. Students will use clues from the story to define the word.

TEACHER SAY: You have good ideas. Let's read the story. We will use context clues to see if your definition is correct. After you finish reading the story, think to yourself, what is Nour trying to do in her letter? Read with your Shoulder Partner.

TEACHER DO: Allow time for students to read and discuss as a whole class. Ask reading comprehension questions, such as:

- What product did Nour make?
- What problem did she have when designing her product?
- How do you know she followed the engineering design process?

 **STUDENTS DO:** Share understanding of reading.

TEACHER SAY: **It sounds as though Nour is learning about the engineering design process just as we are. Now let's go back to our original question. What does it mean to PERSUADE? Let's Popcorn our understanding.**

 **STUDENTS DO:** Explain PERSUADE in their own words.

TEACHER SAY: **Look closely at Nour's letter. Please point to the first part in the letter when Nour says she would like help.**

 **STUDENTS DO:** Point to the last sentence in the first paragraph.

TEACHER SAY: **If we want to persuade someone to help us, we need to tell why our idea is good. What does Nour do next to persuade her family to help?**

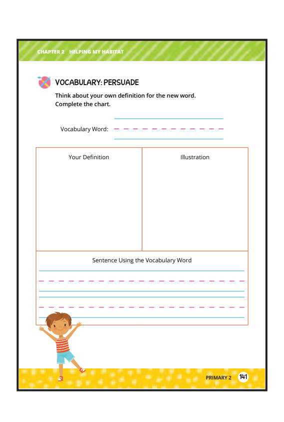
TEACHER DO: Use **Calling Sticks** to begin discussion. Emphasize that Nour explains reasons for how the system is useful.

TEACHER SAY: **Very good. Now let's find all of the reasons Nour thinks the system will be useful. We will Popcorn the reasons Nour gives.**

 **STUDENTS DO:** **Popcorn** to identify reasons Nour states.

TEACHER SAY: **Nour listed many reasons. To end the letter, she asks one more time for help. There are three parts to the persuasive letter. Talk to your Shoulder Partner. What are the three parts?**

 **STUDENTS DO:** Identify the three parts of the letter.



CHAPTER 2 HELPING MY HABITAT

VOCABULARY: PERSUADE

Think about your own definition for the new word. Complete the chart.

Vocabulary Word: ______________

Your Definition	Illustration

Sentence Using the Vocabulary Word

____

PRIMARY 2 141

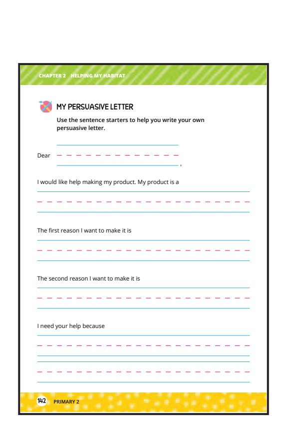
TEACHER SAY: **We are going to practice using persuasion, just like Nour did in her letter. But first, let's complete the page Vocabulary: Persuade in your student book so we remember this important vocabulary word, PERSUADE.**

TEACHER DO: Guide students as needed to complete the page.

 **STUDENTS DO:** Complete page with some direction.

TEACHER SAY: **Thank you for completing your chart. Take time to share your work with your Shoulder Partner.**

 **STUDENTS DO:** Share work with **Shoulder Partner**.



CHAPTER 2 HELPING MY HABITAT

MY PERSUASIVE LETTER

Use the sentence starters to help you write your own persuasive letter.

Dear ______________,

I would like help making my product. My product is a

____

The first reason I want to make it is

____

The second reason I want to make it is

____

I need your help because

____

142 PRIMARY 2

3. TEACHER SAY: **Let's write our own letters to persuade family or a friend to help us make our products. Who will you ask for help? Turn to the next page, My Persuasive Letter, while you decide who to write your letter to.**

 **STUDENTS DO:** Decide who to write to and find page.

TEACHER SAY: **Please tell your Shoulder Partner who you will write to.**

 **STUDENTS DO:** Share ideas.

TEACHER SAY: **We have read Nour's letter. We will use persuasion convince someone to help us, just like Nour did.**

 **READ ALOUD:** **Use the sentence starters to help you write your own persuasive letter.**

TEACHER SAY: **The first line says, Dear _________. What should you write here?**

TEACHER DO: Call on one or two students to answer. If needed, write family names on the board, such as Mother or Father.

TEACHER SAY: **The directions told us to use the sentence starters to write our sentences. Who can read the next sentence starter and tell us how we should complete the sentence?**

TEACHER DO: Choose a few students to respond. Review the sentence starters throughout the letter as needed with students, or have them read with a **Shoulder Partner**. Make certain students understand how to complete each of the sentences independently.

TEACHER SAY: Think about how you can persuade someone. Why do you need help? Why will your product be useful? Complete the sentence starters to persuade the reader.



STUDENTS DO: Work independently to complete the letter.

TEACHER DO: Allow some time for students to work. Write on the board how students should close their letters.

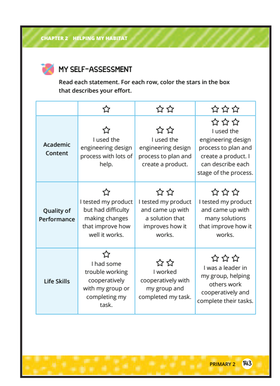
TEACHER SAY: When you finish, you may ask someone nearby who is also finished to check your writing. Be sure to check theirs as well.





STUDENTS DO: Proofread letters with a friend.

TEACHER DO: Bring students back together to complete the rubric.


CHAPTER 2 HELPING MY HABITAT

MY SELF-ASSESSMENT

Read each statement. For each row, color the stars in the box that describes your effort.

	☆	☆☆	☆☆☆
Academic Content	☆ I used the engineering design process with lots of help.	☆☆ I used the engineering design process to plan and create a product.	☆☆☆ I used the engineering design process to plan and create a product. I can describe each stage of the process.
Quality of Performance	☆ I tested my product but had difficulty making changes that improve how well it works.	☆☆ I tested my product and came up with a solution that improves how it works.	☆☆☆ I tested my product and came up with many solutions that improve how it works.
Life Skills	☆ I had some trouble working cooperatively with my group or completing my task.	☆☆ I worked cooperatively with my group and completed my task.	☆☆☆ I was a leader in my group, helping others work cooperatively and complete their tasks.

PRIMARY 2 143

4. TEACHER SAY: You have all worked hard and should be proud of your products. Thank you for also working hard to share your products in a persuasive letter. Let's open our student books to My Self-Assessment. We have already reviewed this together. Take time now to think about your work. Think about how well you worked within your group and completed all your tasks.



STUDENTS DO: Self-assess using rubric.

5. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Let's celebrate our learning in this chapter, "Helping My Habitat." Think about the most important thing you learned. One person will share, then Popcorn to the next. We will keep going as long as we can. I will start.



STUDENTS DO: Share learning.

TEACHER SAY: I can see you are proud of your learning. I am proud of you too.

Rubric Assessment (for teacher use)

	Approaching Expectation (1)	Meeting Expectation (2)	Exceeding Expectation (3)
Academic Content	Describes how a habitat can meet a need of living things using only one example. *Science E.1.b.*	Describes how a habitat can meet the needs of living things using several examples. *Science E.1.b.*	Describes how a habitat can meet the needs of living things using a variety of detailed examples. *Science E.1.b.*
	Describes actions unrelated to being a good steward or without clarifying details. *Social Studies A.1.f.*	Describes the actions of a good steward with concrete details. *Social Studies A.1.f.*	Describes the actions of a good steward with several concrete details that show a deeper understanding of stewardship. *Social Studies A.1.f.*
	Records observations when testing how the product works that are unclear or unrelated to the task. *Science: A.1.c, A.1.d.*	Records relevant observations when testing how the product works. *Science: A.1.c, A.1.d.*	Records clear, detailed, and relevant observations as well as thoughtful insights when testing how the product works. *Science: A.1.c, A.1.d.*
	Explains some of what was learned in research and testing, but the details are incomplete. *Science: A.1.g.*	Explains in detail what was learned in research and testing. *Science: A.1.g.*	Explains in clear and concise detail what was learned in research and testing, including how each related to the product. *Science: A.1.g.*
Quality of Performance	Generates one simple or existing idea to solve a design challenge. *Science F.1.e.*	Generates two or more original ideas to solve a design challenge. *Science F.1.e.*	Generates a wide range of original ideas to solve a design challenge in creative ways. *Science F.1.e.*
	Provides one or no reasons for creating the product in the persuasive letter. *Vocational Fields A.4.d.*	Provides two clear reasons for creating the product in the persuasive letter. *Vocational Fields A.4.d.*	Provides two clear, important reasons for creating the product in the persuasive letter. *Vocational Fields A.4.d.*
Life Skills	Manages or organizes tasks ineffectively, or only with the help of peers or the teacher.	Manages and organizes tasks effectively and independently.	Manages and organizes tasks effectively, also helps to organize peers.
	Offers feedback that is not helpful or does not relate to the plan or product.	Offers feedback to others that helps them improve their plan or product.	Offers insightful feedback to others that helps them improve their plan or product in a meaningful way.

PRIMARY 2

Multidisciplinary

WORLD AROUND ME

Chapter 3:Monumental Designs

Theme Overview

Monumental Designs

COMPONENT	DESCRIPTION	LESSONS
Discover	Students investigate the composition of things in the physical world. Students develop a list of words to describe observable properties of objects. Students discover that some materials can change over time.	2
Learn	Students investigate forms of matter and explain what is needed for changes to occur. Students apply this knowledge to understanding materials and weather on Earth. Students describe how the properties of materials impact building a monument.	6
Share	Students design and build a monument according to stated requirements. Students discuss the importance of tourism and produce an entrance ticket for their monument. Students reflect and assess own learning.	2

Connection to Issues



Environment and Development: Our earth and environment need to be sustained. We can appreciate and care for the environment as a community.

Citizenship: We belong. We are part of our communities, country, and the human family. We all have rights and we all have responsibilities.

Life Skills Addressed



DIMENSION	DESCRIPTION
Learn to Know	**Critical Thinking:** • Define relationships between different objects. **Creativity:** • Organize parts to form a new or unique whole.
Learn to Work	**Collaboration:** • Respect for other opinions. **Productivity:** • Setting clear goals.
Learn to Live Together	**Sharing:** • Effective management and organization of tasks.
Learn to Be	**Accountability:** • Provide effective feedback. **Communication:** • Good listening. • Reading, writing, non-verbal communication skills.

Learning Indicators

Throughout this chapter, students will work toward the following learning indicators:

READING:

D. Reading Skills: Fluency

1.a. Read texts at grade-appropriate difficulty with a level of accuracy and fluency to support understanding.
1.c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

E. Reading Comprehension: Literature

1.a. Ask and answer questions (who, what, where, when, why, and how) about key details in a text.
1.b. Describe how characters in a story respond to major events and challenges.
5.a. Acknowledge and distinguish differences in points of view of a story's main characters.
7.a. Read and comprehend literature, including stories and poetry, at appropriate difficulty level for Primary 2.

F. Reading Comprehension: Informational Text

5.b. Distinguish how specific images (such as diagrams or graphs) provide information.
8.a. Read and comprehend informational text at appropriate difficulty level for Primary 2.

G. Language: Vocabulary Acquisition and Use

1.a. Use sentence-level context to infer, confirm, or correct the meaning of words.
1.f. Orally replace informal language with its formal counterpart.

WRITING:

C. Informational and Opinion

1.b. Write short texts expressing an opinion and providing at least one reason to support the opinion.

SPEAKING AND LISTENING:

A. Foundational Skills

1.a. Participate in collaborative conversations with peers and adults about various topics and texts.
1.b. Follow agreed-upon rules for discussions.
1.d. Ask questions to clarify any misunderstandings concerning the topics and texts under discussion.
2.a. Tell a story or recount an experience in complete sentences with appropriate facts and relevant, descriptive details.
2.b. Recount key ideas or details from a text read aloud or information conveyed orally.
5.a. Speak in complete sentences, following grammatical rules, when appropriate to task and situation.

MATH:

D. Measurement and Data

1.a. Measure lengths of objects in centimeters or meters.
1) Estimate lengths to the nearest 1, 10, 50, and 100 centimeters.
2) Measure to determine how much longer or shorter one object is than another, expressing the difference in centimeters or meters.
3) Explain the relationship between centimeters and meters.

E. Geometry

1.a. Identify the attributes of two-dimensional shapes: triangles, quadrilaterals, pentagons, hexagons.
1.c. Identify and draw shapes having specified attributes, such as a given number of corners (vertices) or sides.

SCIENCES:

A. Skills and Processes

1.a. Ask questions based on observations to find more information.
1.b. With guidance, cooperate to plan and conduct an investigation with peers.
1.c. Use observations to describe patterns.
1.d. Use observations to explain an experience.
1.e. Differentiate between opinion and evidence.
1.f. Obtain information using various texts and text features to answer a question.
1.g. Communicate information with others in oral and written forms.

B. Earth and Space

1.e. Identify where water is located on Earth and classify sources as solid or liquid.

D. Physical Science

1.a. Classify objects and materials as solid, liquid, or gas.
1.b. Classify and describe observable properties of materials (such as solid, liquid, texture, hardness, flexibility, and if it occurs naturally or is manufactured).
1.c. Describe observable changes to a material based on heating and cooling (such as cooking, melting, or freezing).
1.d. Classify observed changes (from heating and cooling) as changes that can and cannot be reversed.

SOCIAL STUDIES:

C. Understanding the World from a Spatial Perspective

1.b. Describe a place using bird's-eye view, satellite images, photographs, and pictures.
1.c. Identify the location of Egypt and Egypt's main regions on a map.
1.f. Use a map to locate and identify sources of fresh and salt water.
2.c. Identify and **model** some Islamic and Coptic historic monuments (such as Azhar Mosque and the Hanging Church).

VISUAL ART:

A. Producing Visual Art

1.b. Create a work of art inspired by letters and numbers.
2.a. Use various drawing and coloring tools to create art.
2.b. Create art that explores personal interests, questions, and curiosity.
2.c. Repurpose objects from the surroundings to make something new.

2.d. Compare the texture of various items and materials.
2.e. Describe the texture of items or materials found in nature.
3.c. Use technology to create a digital work of art.

B. Presenting Visual Art
1.c. Participate in producing and displaying a work of art (individually or collectively) relating to current events in home, school, or community life.

VOCATIONAL FIELDS:

A. Career Social Skills and Preparation
1.b. Work cooperatively with another student to accomplish a task.
2.a. Identify current personal interests and strengths.
2.b. Identify how interests relate to various professions.
2.c. Explain how what is learned at school can help in a profession.
4.a. Describe various occupations and explain the importance of various professions in the community (such as industrial, agricultural, commercial, hotel, and tourism).
4.b. Identify and describe the function of tools in various professions.
4.d. Develop simple products representative of various professions using materials from the environment.

INFORMATION AND COMMUNICATION TECHNOLOGIES:

C. Technological Production Tools
1.a. Use digital technologies (such as a computer) appropriately to support learning.
2.a. Use a variety of age-appropriate digital tools (such as a drawing program or presentation software) to communicate and exchange ideas.
2.b. Design digital projects that suit students' interests and capacities.

COMPUTATIONAL THINKING:

Math
E.1.c. Identify and draw shapes having specified attributes, such as a given number of corners (vertices) or sides.

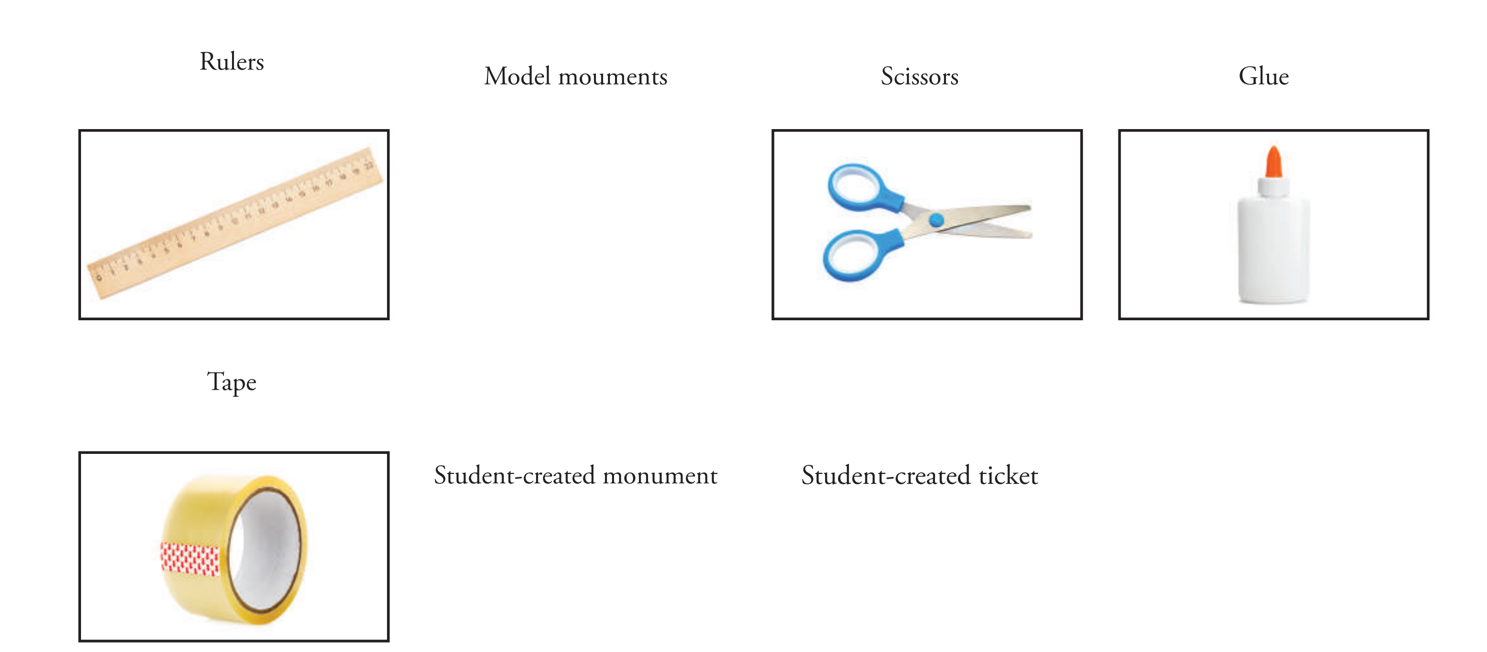
Science
A.1.b. With guidance, cooperate to plan and conduct an investigation with peers.
A.1.c. Use observations to describe patterns.
F.1.e. Develop the abilities to apply the design process.

CH 3 Pacing Guide

LESSON	INSTRUCTIONAL FOCUS
1	**DISCOVER: Students will:** • Interact with the three forms of matter. • Follow steps in an experiment. • Explain results of an experiment.
2	**DISCOVER: Students will:** • Determine how senses are used to observe properties of materials. • Develop a list of words to describe observable properties of objects. • Predict how some materials can change over time.
3	**LEARN: Students will:** • Investigate forms of matter. • Describe changes of state and what is needed for changes of state to occur. • Identify examples of water in all three forms.
4	**LEARN: Students will:** • View satellite images of the Earth. • Identify where water on Earth is located. • Determine the form of water (solid, liquid, gas) in an Earth scene.
5	**LEARN: Students will:** • Describe how temperature can change the properties of a material. • Predict how weather affects natural and human-made objects. • Describe how the properties of materials impact their use for building.
6	**LEARN: Students will:** • Name and describe monuments found in Egypt. • Specify attributes of shapes and patterns. • Create patterns using shapes and lines. • Explain use of requirements in design thinking.
7	**LEARN: Students will:** • **Brainstorm** ideas for a monument. • Plan for design of a monument using requirements. • Apply knowledge of material properties to monument design.
8	**LEARN: Students will:** • Use a checklist to record progress on given task. • Build a monument that honors a person or event. • Define and explain importance of tourists.
9	**SHARE: Students will:** • Analyze samples of tickets for artistic content. • Design artwork in the form of a ticket for a monument. • Provide creative feedback to others.
10	**SHARE: Students will:** • Relate a story to own learning. • Observe others' work and offer opinions. • Reflect and assess own learning.

Materials Used

Pencils	Crayons	Chart paper	Board
Markers	Bottles	Small paper cups	Balloons
Vinegar	Funnel	Tape	Baking soda
Food coloring	Measuring spoons	Paper	Transparent containers
Water	Ice	Shape manipulatives (square,rectangles, triangles)	Colored pencils


Rulers
Model mouments
Scissors
Glue
Tape
Student-created monument
Student-created ticket

Lesson 1 Overview

LEARNING OUTCOMES

Students will:
- Interact with the three forms of matter.
- Follow steps in an experiment.
- Explain results of an experiment.

KEY VOCABULARY

- Gas
- Inflate
- Liquid
- Solid

PREPARATION

Students will be building monuments for the Share project. Have available or ask students to bring in recyclable materials and other supplies to build the monuments.

Review this lesson and decide whether the balloon experiment is feasible in small groups (recommended) or if it will be a teacher demonstration. Complete the balloon experiment on your own before class if possible to identify any steps where the students may struggle and to confirm that you understand each step. Prepare the following materials in one central location for teacher use or as a supply station for student groups to access when needed. Materials (for each group) include:

- Bottle (glass or plastic) filled with approximately 350 ml of vinegar
- Small cup with approximately 15 ml baking soda
- One balloon
- One piece of paper to make a funnel
- Food coloring (optional)

MATERIALS

- Student book
- Pencils
- Crayons
- Chart paper or board
- Markers
- Bottles
- Small paper cups
- Balloons
- Vinegar
- Funnel
- Tape
- Baking soda (bicarbonate)
- Food coloring (optional)
- Measuring spoons (or process for approximating)
- Paper

LIFE SKILLS

Learn to Live Together

Sharing:
- Effective management and organization of tasks.



Discover (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen. Encourage students to lead this routine as they become more comfortable.

TEACHER SAY: Today we start a new chapter of learning about the world around us. We have learned about the night sky and investigated our local habitats. Now we are going to look even more closely at the materials that make up what we see in our world. Looking ahead, part of your Share project will be to build a model of a monument. What we learn about materials will help us decide what to use to build a monument. Let's start by looking around. Popcorn to name some of the objects we see in our classroom.

TEACHER DO: Call on one student to start the **Popcorn**. Encourage students to look around the classroom. Make a list on the board of objects that students name.

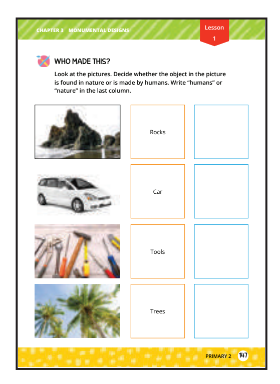
 **STUDENTS DO:** Share objects and **Popcorn**.

TEACHER SAY: Thank you. Now let's think about things outdoors. What are some things we discussed last chapter that we find outside?

TEACHER DO: Call on one student to start, then **Popcorn**. Continue recording.

 **STUDENTS DO:** Share ideas and **Popcorn**.

Note to Teacher: Encourage students to think of naturally occurring things as well as objects made by humans.


CHAPTER 3 MONUMENTAL DESIGNS
Lesson 1

WHO MADE THIS?

Look at the pictures. Decide whether the object in the picture is found in nature or is made by humans. Write "humans" or "nature" in the last column.

Rocks

Car

Tools

Trees

PRIMARY 2 147

TEACHER SAY: Very good. I can see that you are paying attention to the world around us. You have mentioned many things that we encounter in our lives. You learned about the differences between human-made and natural objects in Primary 1. Think back to what you learned. Let's categorize some objects to review. Please open your student books to Who Made This?

 **READ ALOUD: Look at the pictures. Decide whether the object in the picture is found in nature or is made by humans. Write "humans" or "nature" in the last column.**

TEACHER SAY: Please complete the page on your own and we will discuss it when you have finished.

 **STUDENTS DO:** Complete the page.

Note to Teacher: If students were not involved in Education 2.0 in Primary 1, discuss the differences between human-made and natural objects. Otherwise, this learning experience can also be used as a pre-assessment to determine what students remember.

TEACHER DO: Add the following to the class list or circle them if already included: rock, car, tools, and trees. Use **Calling Sticks** to review answers for the student book page, then categorize the other items on the class list. Save the list for the next lesson.

 **STUDENTS DO:** Categorize objects.

2. TEACHER SAY: Thank you for helping us decide whether these objects are found in nature or are made by humans. What I am wondering is, how do we know?

TEACHER DO: Lead a discussion to gather ideas about how students know whether something is naturally occurring or is made by humans. Allow as many ideas as possible. Ideas to bring into the discussion include:

- What the object is made of
- What it looks like (design)
- Where it is found
- Whether it is alive

TEACHER SAY: This has been a very interesting discussion. Have you noticed that humans use materials found in nature to produce new things? Please look at your pencil. What is it made of?

TEACHER DO: Choose students using **Calling Sticks**. Answers may include wood, pencil lead or graphite, paint, metal, and rubber.

TEACHER SAY: Humans put all of these materials together and made a pencil. Let's look back at our list. What are some other examples of humans putting materials together?

TEACHER DO: Use **Popcorn** to choose a student to start the discussion. Focus students on describing the various materials in listed objects.

 **STUDENTS DO:** Respond and **Popcorn**.

TEACHER SAY: Thank you very much for your suggestions. Humans like to make things that do jobs for them. Can you give an example of a tool or an object humans have made to do a job?

TEACHER DO: Use **Calling Sticks** to choose two or three students to respond. Encourage students to be descriptive with their answers (prompt students to give more than one-word answers).

 **STUDENTS DO:** Share ideas.

3. TEACHER SAY: Today we are going to work with some materials to create a tool to do a job for us. We are going to make a simple machine to inflate a balloon. You may say, "I can inflate a balloon myself." This is true. But imagine that your task was to inflate 25 balloons. You might get tired and need a tool. We will work in groups to assemble our machines.

TEACHER DO: Put students into groups that are as small as possible for the available space.

Note to Teacher: This can also be done as a teacher demonstration. However, it will be much more engaging for the students if they do it themselves.

TEACHER SAY: First, let's discuss the materials we will use to make our machine.

TEACHER DO: Hold up one of the bottles the students will use.

TEACHER SAY: This is one item we will use. What is it made of?

TEACHER DO: Use **Calling Sticks** to choose students to respond until the correct answer is given.

TEACHER SAY: Very good. The bottle is stiff, and it holds its own shape. What do we call materials like this bottle, or your pencil? What do we call materials that are somewhat hard and hold their own shape?

TEACHER DO: Choose a few students with raised hands to answer until the correct answer is given (solid). If it is not given, offer the correct answer. Write the word SOLID on the board.

TEACHER SAY: Very good. Let's Popcorn to name other examples of solids.

 **STUDENTS DO: Popcorn** to share ideas.

TEACHER DO: Pour a bit of vinegar from its container into a cup.

TEACHER SAY: We will also use some of this. You may not be able to tell what this is from your seat. It is vinegar. We sometimes use vinegar in cooking. Did you see how I poured the vinegar into the cup? What do we call a substance that we can pour?

TEACHER DO: Choose a few students with raised hands to answer until the correct answer is given (liquid). Write the word LIQUID on the board.

TEACHER SAY: Do liquids hold their own shape, or do they need a container? Let's use Number Sign to answer: Hold up one finger if you think that a liquid can hold its own shape, and hold up two fingers if you think a liquid takes the shape of the container it is in.

TEACHER DO: While students are holding up their fingers, pour a little more vinegar from its container into the cup.

TEACHER SAY: Notice what I am doing as you answer using a Number Sign. One finger for "liquid holds its own shape," and two fingers for "liquid takes the shape of the container that it is in."

 **STUDENTS DO:** Respond using **Number Sign**.

TEACHER SAY: Two fingers is correct. A liquid does not have a set shape on its own. Let's see if we can Popcorn to name other examples of liquids besides vinegar.

 **STUDENTS DO: Popcorn** to share ideas.

TEACHER SAY: Very good. We see now that materials can be solids, or they can be liquids. There is one more category that materials can be. This one is hard to see, though. In fact, our list does not include anything made out of this category. The air we breathe is in gas form. Since gases are hard to see, let's build our balloon inflating machine to help us.

TEACHER DO: If working in groups, direct students to determine who will pick up which materials for their group. Explain that each student will take turns to help make the machine.

TEACHER SAY: Thank you for being careful with your supplies. You have brought several materials back to your area. What materials do you have? When I call on you, please hold up an item and tell us what it is.

TEACHER DO: Use **Calling Sticks** to choose students until they have listed all the assembled materials. When vinegar is mentioned, point out that it is a liquid. When baking soda (or white powder) is held up, note that it is a solid.

Note to Teacher: This practice focuses the students' attention on the materials to facilitate understanding of the directions and the discussion that follows.

TEACHER SAY: Very good. Now we are ready to begin. Please turn to Let's Inflate a Balloon in your student books. We will read the directions together, one step at a time. Please do not move to the next step ahead of everyone else.

TEACHER DO: Use **Calling Sticks** to choose a student to read the first instruction. Demonstrate stretching and then blowing up the balloons.



STUDENTS DO: Listen to, then follow, the first instruction.

TEACHER DO: Repeat the procedure for each instruction, offering tips and reminders to be careful along the way:

- A student reads the instruction.
- The teacher demonstrates the step.
- Students complete the same step.





STUDENTS DO: Follow the instructions step by step.

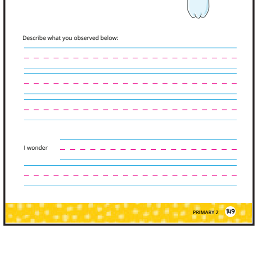
TEACHER DO: Walk around and help students as needed. After the chemical reaction is complete and the balloon has inflated, allow time for students to observe and comment within their groups.



STUDENTS DO: Observe and discuss.

TEACHER DO: Lead students to think about their observation. Ask questions such as:

- What happened when the balloon was placed on the bottle?
- What happened to the baking soda?
- What happened as the baking soda landed in the vinegar?
- What happened to the balloon?
- Why do you think this happened?
- These questions will help students make meaning out of what they observed.



When students are ready, read the prompt at the bottom of the page.



STUDENTS DO: Record observations.

TEACHER SAY: Thank you for being so thoughtful in your observations. Who can remind us what materials went into the bottle?

TEACHER DO: Choose students with raised hands to respond (vinegar, baking soda).

TEACHER SAY: Yes, we used vinegar, a liquid, and baking soda, a solid, in our bottle. Something made the balloon inflate. What type of material do you think went into the balloon?

TEACHER DO: Use **Calling Sticks** to get ideas about what filled the balloon.



STUDENTS DO: Respond and share ideas.

TEACHER SAY: Very good, so something happened in the bottle when the vinegar and baking soda were mixed. They produced a gas. What evidence do I have for saying that a gas was produced?



STUDENTS DO: Share ideas.

TEACHER SAY: Good observations. We could not see the gas itself, but we saw bubbles and the balloon inflated. What filled the balloon was not a solid or a liquid. It was a gas.

TEACHER DO: Write the word GAS on the board underneath SOLID and LIQUID.

TEACHER SAY: During this chapter we are going to learn more about different kinds of materials and ways that materials can change. Write one question at the bottom of the page that you wonder about our experiment. When you finish, please clean up the materials in your area.

 **STUDENTS DO:** Clean up.

4. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: To end our class today, share with your Shoulder Partner what you are still wondering. Think about what you observed during our experiment.

 **STUDENTS DO:** Discuss ongoing questions.

TEACHER DO: Give the students about five minutes to discuss the day's exploration.

TEACHER SAY: Thank you for helping clean up. We will talk more about properties of materials like solids, liquids, and gases tomorrow.

Lesson 2 Overview

LEARNING OUTCOMES

Students will:
- Determine how senses are used to observe properties of materials.
- Develop a list of words to describe observable properties of objects.
- Predict how some materials can change over time.

KEY VOCABULARY

- Liquid
- Properties
- Solid

MATERIALS

- Student book
- Pencils
- Crayons
- Chart paper or board
- Markers
- Transparent containers (see Preparation)
- Water
- Ice (if possible)



PREPARATION

Prior to class, collect items of varying materials with different textures and place them around the room where the students can see them. Include liquids, such as a bottle of water or juice. A small quantity of ice is used for the demonstration of change from solid to liquid. If ice is not available, omit.

Note to Teacher: The experimental part of the lesson is most effective if the student groups can have access to about 200 ml of water and two transparent (glass or see-through plastic) containers (about 250 ml each). However, if this is not manageable, the experimental section can be carried out as a demonstration by the teacher.

LIFE SKILLS

Learn to Be

Communication:
- Good listening.
- Reading, writing, non-verbal communication skills.



Discover (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen.

TEACHER SAY: In our last lesson, we learned about solids, liquids, and gases. Let's see if we can remember examples of each. When I name something, use Number Sign to vote on whether it is a solid (one finger), a liquid (two fingers), or a gas (three fingers).

TEACHER DO: Name two or three solids, liquids, and gases in any order. As students will not know the names of gases, use phrases such as "the air I breathe in," "my breath when I exhale," or "what filled the balloon in our last lesson."



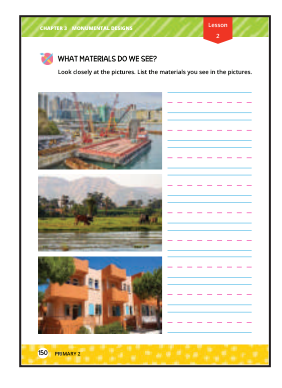
STUDENTS DO: Vote on solid, liquid, gas using **Number Sign**.

TEACHER SAY: I have one more item: ice. Is ice a solid, liquid, or gas? Show me your Number Sign.

TEACHER DO: If students disagree, ask students with different answers to provide the evidence behind their choice. Allow some discussion, and then state that it is a solid. If available, bring a few pieces of ice into the classroom to show students, and then set aside until later in the class.

2. TEACHER SAY: In our last lesson we made a list of objects we see inside and outside our classroom. We categorized these objects into human-made and natural. We observed that humans often produce new objects from natural materials. Today we are going to learn more about the materials that make up the objects in our world. Use some Think Time to consider what different materials the objects on our list are made of.

TEACHER DO: Provide students **Think Time**.


WHAT MATERIALS DO WE SEE?

Look closely at the pictures. List the materials you see in the pictures.

TEACHER SAY: Now that you have had a few moments to think, please open your student book to What Materials Do We See?

 **READ ALOUD: Look closely at the pictures. List the materials you see in the pictures.**

TEACHER SAY: Please take a few minutes to complete the page. Think about all of the different objects you see in the pictures. Make the longest list of materials that you can. If you need help writing a word, whisper to your Shoulder Partner.

TEACHER DO: Give students time to consider the images and make a list in the student book. Encourage students to consider all of the different things in the pictures.

 **STUDENTS DO:** List materials identifiable in the images.

TEACHER SAY: Let's share what we have been thinking and writing about. What are some of the materials you listed?

TEACHER DO: Make a list on the board. Use **Calling Sticks** to choose students to respond until the list is complete.

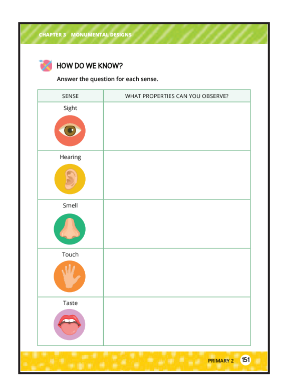
 **STUDENTS DO:** Respond and point to items when appropriate.

TEACHER SAY: We have a wonderful list. We see objects made of wood, paper, glass, ceramic or clay, metal, plastic, and cloth. Outside there is also concrete. There can be water, plants, and soil as well. Let's think about how we identify things. For example, how do we know this is a piece of paper?

TEACHER DO: Hold up a piece of paper. Use **Calling Sticks** to choose several students to respond.

 **STUDENTS DO:** Share ideas.

Note to Teacher: Two types of responses may emerge: 1) methods of determining what the item is made of ("I know it is paper because I can see it and feel it") and 2) properties of the item (texture, color, shape, and so on). Encourage discussion to make the distinction between method of observation and properties. The methods make use of the senses, and the properties are what the senses are sensing. For example, texture (property) is sensed (observed) by the sense of touch.


HOW DO WE KNOW?

Answer the question for each sense.

SENSE	WHAT PROPERTIES CAN YOU OBSERVE?
Sight	
Hearing	
Smell	
Touch	
Taste	

3. TEACHER SAY: Very good. Let's think more about how we know what things are made of. Please turn in your student book to How Do We Know? Read the directions with your Shoulder Partner.

 **STUDENTS DO:** Read directions with **Shoulder Partner**.

TEACHER SAY: The first column is labeled "Sense." In this column we will write the sense used to describe an object. The next column in the chart is labeled, "What properties can you observe?" What do we mean by "properties?"

TEACHER DO: Choose students with raised hands. If students do not know, define for them. Prepare to show students an object to describe.

TEACHER SAY: Properties are things we can measure or observe by using our senses. We use our senses to figure out what something is made of. Let's try an example together using the first sense on the chart: sight. Look at this item. [Hold up object so all can see.] What are two properties of this object that you can see?

TEACHER DO: Use **Calling Sticks** to choose two students to respond. If students struggle to answer, prompt them to consider the color, shape, whether the object is shiny or dull, and so on.

 **STUDENTS DO:** Share ideas.

TEACHER SAY: Yes, those properties can be observed with the sense of sight. Please write those

in the row for the sense of sight.

TEACHER DO: Duplicate the table on the board and write those two properties in the row for the sense of sight. Pass around some of the objects that you collected (see Preparation) to spark the students' imagination.

TEACHER SAY: I am passing around some objects to help you begin thinking about properties. Please talk with your Shoulder Partner about the objects, then pass them along to your neighbor. What properties can you observe? Complete the table in your student book with as many words as you can.

TEACHER DO: Remind students that usually properties observed through "taste" should come from their imaginations rather than direct observation. Sometimes we use prior experience to help us with things we cannot directly observe. An example you may share with students might be that students may have tasted a lemon, and know it is sour, even if they cannot taste it in class.

 **STUDENTS DO:** Complete the table.

TEACHER SAY: Let's discuss the properties we can observe with our senses.

TEACHER DO: Lead a discussion on the observable properties students listed. Use **Calling Sticks** to engage students in discussion.

TEACHER SAY: Now that we have thought of some observable properties of objects, let's agree on a common way to describe these properties. I will start with an example, then I hope you will help me with the other senses.

TEACHER DO: Make a list on the board. Start with one of the properties that a student mentioned. (See example below.) Add examples given by students.

Sense	Property	Descriptive Words
See	Color	Red, Orange, Yellow, Green, Blue, Violet, and so on
Hear	Sound	Loud, Soft, Quiet

4. TEACHER SAY: Let's try to identify an object just with its description. I am looking at something in the room. You decide what I am looking at based on the clues I give you. Use all my clues and do not just guess an answer.

TEACHER DO: Choose an object and use the **I See Very Clearly** strategy to give students clues about the object. Use as many senses as possible to describe the object giving one clue at a time. After each clue, choose a student to guess the object. If time allows, repeat the process with one more item.

TEACHER SAY: You did a wonderful job matching the properties I described to the object. How do you think descriptions like this can help us figure out what something is made of?

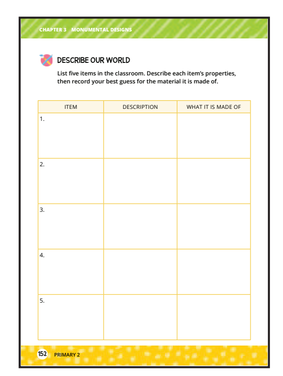
 **STUDENTS DO:** Offer ideas.

TEACHER SAY: We know a lot about the properties of materials. We can match what we know about materials to what we observe about an object.

TEACHER DO: Hold up a pencil, and **Think Aloud** to demonstrate matching properties to materials. List metal, plastic, and wood on the board, and then cross the first two out as you eliminate them in your explanation.

TEACHER SAY: I can feel that this pencil is hard. We know that metal is often hard, so are some plastics, and so is wood. I also know that if I hit metal against metal, it makes a specific sound. But if I hit this pencil against metal, I do not hear a sound of metal on metal. I am fairly confident it is not made of metal. [Cross off metal from the list.]

I also know that if I try to push my nail into hard plastic, it will not make a mark. If I push my nail into this pencil, though, it leaves a mark. I am fairly confident this pencil is not made of


CHAPTER 3 MONUMENTAL DESIGNS

DESCRIBE OUR WORLD

List five items in the classroom. Describe each item's properties, then record your best guess for the material it is made of.

ITEM	DESCRIPTION	WHAT IT IS MADE OF
1.		
2.		
3.		
4.		
5.		

152 PRIMARY 2

plastic either. [Cross off plastic from the list.]

That leaves wood. Now it is your turn to try matching descriptions to materials. Please open your student books to Describe Our World.



READ ALOUD: **List five items in the classroom. Describe each item's properties, then record your best guess at the material it is made of.**

TEACHER SAY: **Take the time to carefully think about each object you pick. Think about how you know what it is made of as you fill in the table.**



STUDENTS DO: Complete table in student book.

TEACHER DO: Circulate around the room to provide assistance as needed and to prompt students to articulate their thinking.

TEACHER SAY: **Let's share some of the things you described. Hands Up, Pair Up to find a partner. Take your student book with you. Each of you will share one of your descriptions, just as I did earlier. Then we will see if your partner can identify the object.**





STUDENTS DO: Share descriptions.

TEACHER DO: Direct students to change partners after each has shared one or two of their objects. Encourage students to help each other add to descriptions if they are not complete enough to identify the object.

5. TEACHER SAY: **All of the materials that we see around us, even though they are made of different things, are in the three forms we talked about yesterday. One of the forms was solid. We have been learning more about solids today. What were the other two forms?**

TEACHER DO: Use Calling Sticks to choose students until "liquid" and "gas" are given.

TEACHER SAY: **Very good. Let's look at your pencil again. It is made of wood, which is a solid. It holds its shape. Let's Popcorn some other solids in the room. As you name solids, please add to your statement, "It holds its shape."**



STUDENTS DO: Identify solids.

TEACHER SAY: **What if I asked you to touch some water. Does it hold its shape?**



STUDENTS DO: Respond.

TEACHER SAY: **Hmmmm. This is interesting. There is something about water that makes it different from your pencil. What is different about water?**

TEACHER DO: Lead a discussion about the differences between water (a liquid) and a pencil (a solid). The discussion should include the idea that a liquid needs to be contained (as in a bottle) or it will keep flowing. Include the idea that liquids take the shape of their container, whereas solids do not.

TEACHER SAY: **By the way, do you remember the ice that I had in my container at the beginning of the lesson? Look at what has happened.**

TEACHER DO: Hold up the container. Swirl it around so students can see evidence of melting.

TEACHER SAY: **What do you think happened to the ice in the container?**

TEACHER DO: Use Calling Sticks to choose students to respond.



STUDENTS DO: Share ideas.

Note to Teacher: If ice is not available, replace exchange above with a discussion that begins with, "Who can tell me what happens if we leave ice outside in the sun on a hot day?"

6. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: These are interesting ideas. We will talk about how ice turns to water in the next lesson. I want us to prepare for a discussion next time. I am putting some water in this container. I would like to mark the water level on the container with a marker.

TEACHER DO: Choose a student to mark the water level on the container with a marker.

TEACHER SAY: Thank you for your help. Please remind me to check the water level at the beginning of the next lesson. I wonder if it will be at the same mark? What do you think? Tell your Shoulder Partner your prediction.

 **STUDENTS DO:** Discuss predictions.

TEACHER SAY: I heard some good predictions. Thank you very much for all of your hard work today. During our next lesson, we will learn more about the materials in the world around us.

Lesson 3 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Investigate forms of matter. • Describe changes of state and what is needed for changes of state to occur. • Identify examples of water in all three forms.	• Freeze • Melt • Temperature • Vapor	• Student book • Pencils • Crayons • Chart paper or board • Markers • Transparent containers (see Preparation) • Water • Ice (if possible)

PREPARATION

Bring another small quantity of ice to review the demonstration of change from solid to liquid. If ice is unavailable, be prepared with a photo of ice to share.

LIFE SKILLS

Learn to Be	Learn to Know
Communication: • Good listening. • Reading, writing, non-verbal communication skills.	Critical Thinking: • Define relationships between different objects.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **Let's continue discussing the world around us. I have noticed how well you lead your own discussions at the end of our lessons. Today, we will choose one student to lead our opening. Please raise your hand if you would like to be our leader today.**

TEACHER DO: Choose a student with hand raised to join you and choose the **Calling Sticks** for the discussion.

TEACHER SAY: **Our question is: What are some examples of materials that make up the things in our world, either here in the classroom or at home?**

TEACHER DO: Offer the **Calling Sticks** to the discussion leader.

 STUDENTS DO: Discuss the question posed.

2. TEACHER SAY: **Thank you for sharing your ideas. Now let's continue our discussion about materials. In the last lesson we learned how to describe solids. How would you describe water? What kind of material is it?**

TEACHER DO: Use **Calling Sticks** to choose a few students to respond to get several descriptions of water (such as wet, a liquid, clear).

 STUDENTS DO: Share ideas.

TEACHER SAY: **Thank you for your ideas. We usually think about water as being a liquid. I have a thinking question for you. Do you think water can be a solid?**

 **STUDENTS DO:** Use **Think Time**, then discuss.

TEACHER DO: Promote discussion to lead students to think about ice. If students do not arrive at the idea of ice on their own, pick up the container of ice. If ice is not available, a picture of ice could be shown.

TEACHER SAY: **Yes, water can become a solid if it is frozen into ice. If we put water in a very cold place, it will become ice. We call this process "freezing."**

TEACHER DO: Write on the board: Water → Ice: Freezing.

TEACHER SAY: **I have ice here in this container, just like I did at the beginning of the last lesson. Who can tell us what happened to the ice during the last class?**

 **STUDENTS DO:** Share ideas.

TEACHER SAY: **That is correct. The solid ice turned into liquid water during the last class. What is that process called, when a solid turns into a liquid?**

 **STUDENTS DO:** Share ideas (melting).

TEACHER SAY: **That is correct. We describe a solid turning into a liquid as "melting."**

TEACHER DO: Write on the board: Ice → Water: Melting.

3. TEACHER SAY: **Let's look at the water we had in this container during the last lesson.**

TEACHER DO: Hold up the container with the water level marked on the side.

TEACHER SAY: **Let's see if there are any changes to the water level since our last class.**

TEACHER DO: Choose a student to look closely at the mark on the container and share observations with the class.

TEACHER SAY: **Thank you. We see the water level has changed a little bit. The water is now below the mark, meaning there is less in the container. Where did the water go?**



TEACHER DO: Use **Calling Sticks** to choose students to answer. Prompt discussion by asking students if they agree with a previous comment.

 **STUDENTS DO:** Share ideas.

TEACHER SAY: **Thank you for your ideas. Our water level is lower because some of the liquid water escaped into the air and became water vapor. We use the word "vapor" to mean the liquid water has turned into a gas.**

TEACHER DO: Write on the board: Water → Water Vapor.

TEACHER SAY: **Normally we cannot see water vapor, unless there is a lot of it. Clouds are examples of water vapor we can see. Can you think of another example?**

TEACHER DO: Choose students who are willing to respond. Students may or may not be able to answer this question.

 **STUDENTS DO:** Respond.

TEACHER SAY: **These are very good ideas. Steam is another example of water vapor we can sometimes see, like from a tea kettle. When the water vapor is very hot, we call the water vapor "steam." Steam is a gas.**

TEACHER DO: Add steam to the end of the words on the board, resulting in: Water → Water Vapor/Steam.

TEACHER SAY: If we want to turn liquid water into steam, we add heat, like when we heat the kettle for tea. When we add heat, we cause the water to boil. Boiling is a process that we will learn about later in science classes.

Look at the list I have made on the board. Now, do you think that water is a solid, liquid, or gas? Use Think Time.

 **STUDENTS DO:** Think about the different properties of water.

TEACHER SAY: My question is a little unfair. Our list shows us that water can be all three. What do we call water when it is a solid?

TEACHER DO: Invite all students to respond together. Next ask: What form is it when it is a liquid? What form is it when it is a gas?

 **STUDENTS DO:** Respond together.

4. TEACHER SAY: Very good. Let's apply what we know. Please turn to Three Forms of Water in your student books. Take a moment to read the directions, then we will review them together.

 **STUDENTS DO:** Read the directions.

TEACHER SAY: The forms that water can be in—ice, water, and vapor or steam—are in one column. Draw a line from the word to the picture that matches the word. The forms—liquid, gas, and solid—are in another column. Draw a line from the picture to the word that matches the picture.

 **STUDENTS DO:** Follow instructions to complete the student book page.

5. TEACHER SAY: Water can be in all three forms. To get water to change form requires something special. Does anyone know what it is? I will give you a hint: think about making tea.



TEACHER DO: Use Calling Sticks to choose students to respond to get a number of different ideas.

 **STUDENTS DO:** Share ideas.

TEACHER SAY: These are all very good ideas. To get water to boil, we add heat. To make liquid water turn into ice, what do we do?

TEACHER DO: Choose students to respond until the response "take away heat" or "make it colder" is given.

TEACHER SAY: Very good. So, in both cases, boiling water or making ice, we have to change the temperature of the water. Remember my ice?

TEACHER DO: Hold up the ice.

TEACHER SAY: I got it from a freezer. Remember what happened to the ice during last class? I wonder what is happening to my new ice now. Raise one finger if you think "ice is melting." Raise two fingers for "ice is freezing." Raise three fingers for "ice is boiling."

 **STUDENTS DO:** Respond using Number Sign.

TEACHER SAY: Very good. The ice is melting. We said melting is an example of the form of water changing. Again, let's remember, what needs to happen to get the ice to melt?

TEACHER DO: Use Calling Sticks to choose multiple students to respond.

 **STUDENTS DO:** Share ideas.

TEACHER SAY: **These are all very good ideas. The temperature of the ice has to change for it to melt. Remember, to change the form of water, the temperature must change. To get ice to melt, do we warm it up or cool it down?**

Note to Teacher: Technically, the statement "to change the form of water, the temperature must change" is true for any given pressure. This distinction is beyond the scope of P2, and all of the examples given here are at the same pressure (atmospheric pressure).

 **STUDENTS DO:** Respond.

CHAPTER 3 MONUMENTAL DESIGNS

CHANGING FORMS

Decide whether the change requires warming up or cooling down. Write your answer in the box. Give an example of the change.

CHANGE	WARM UP OR COOL DOWN?
Solid → Liquid Example:	
Liquid → Solid Example:	
Liquid → Gas Example:	
Gas → Liquid BONUS Example:	

154 PRIMARY 2

TEACHER SAY: **Very good. The ice is melting, so it is warming up. Our classroom is warmer than the freezer. Please turn to Changing Forms in your student book and read the directions.**

 **STUDENTS DO:** Read the directions.

TEACHER SAY: **Decide whether the change shown in each box requires that the material warm up or cool down. Then, give an example. We just answered the first one. Let's put it in our student books together. What was the example of a solid turning to a liquid?**

TEACHER DO: Hold up the container of melting ice and choose a student to respond.

 **STUDENTS DO:** Respond.

TEACHER SAY: **Yes, ice turning to water is an example of a solid turning to a liquid. Please write that in your student book. And to make ice turn to water, does the ice need to warm up or cool down?**

TEACHER DO: Allow students to record the first answer in the student book, then choose a student to respond to the second question.

TEACHER SAY: **Yes, ice turning to water is an example of a solid turning to a liquid. Please write that in your student book.**

 **STUDENTS DO:** Record in student book.



TEACHER SAY: **Work with your Shoulder Partner to complete the information in your student book. If there is something that you do not understand, raise your hand and I will help you.**

TEACHER DO: Walk around and help students, particularly with the examples of changes of state that they may not know, such as gas → liquid. (An example is water forming on the outside of a glass with a cold drink in it.)

Note to Teacher: Help students reason out how gas may become a liquid. For example: Since we increase the temperature to make a liquid become a gas, what do you think we should do to turn gas back into a liquid?

5. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: **We have learned about the three forms of water today and how it changes from one to another. Please get together in your groups and discuss whether you think materials other than water might also be able to exist in different forms.**



 **STUDENTS DO:** Form groups and discuss the question provided.

TEACHER SAY: **Thank you for all of your hard work today. In our next lesson, we will be thinking more about forms that materials are in and how these ideas apply to water on our planet.**

Lesson 4 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • View satellite images of the Earth. • Identify where water on Earth is located. • Determine the form of water (solid, liquid, gas) in an Earth scene.	• Iceberg • Satellite	• Student book • Pencils • Crayons • Chart paper or board • Markers • Transparent containers (see Preparation) • Water • Ice (if possible)

PREPARATION

Put up a map of Egypt where the students can see it, or, if possible, use a computer to project a map of Egypt.

LIFE SKILLS

Learn to Be	Learn to Work
Communication: • Good listening.	Collaboration: • Respect for other opinions.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **During our last class, we talked about the three forms that materials can take. Our student leader today will choose three students to remind us about what we learned in our last lesson.**

TEACHER DO: Use Calling Sticks to choose a student leader, then have the leader choose three more.

 STUDENTS DO: Share ideas.

2. TEACHER SAY: **Thank you for leading our discussion. During our last class, we studied how water can be found in all three forms. Today we are going to talk more about water in the world around us. It may not seem like this is true from the desert, but there is abundant water in our world. Where are some places that we can find water?**

 STUDENTS DO: Share ideas.

TEACHER DO: Lead a discussion of the places where water is found on Earth. Encourage students to think beyond home, school, and the local community. List places and types of water on the board.

TEACHER SAY: **Water is very important in communities. It is also important for our whole planet. Can someone remind me: What is our planet called?**

 STUDENTS DO: Respond.

TEACHER SAY: **Now I have a thinking question for you. In what form is water found around**

the Earth? Are the examples we have listed solid, liquid, or gas?

TEACHER DO: Use **Calling Sticks** to choose students. Accept all answers.

TEACHER SAY: Our planet, Earth, is mostly covered with water. Let's look at a picture of our Earth together. Please turn to Our World in your student books and read the directions.

 **STUDENTS DO:** Find page and read directions.

TEACHER SAY: This is a picture of our planet Earth taken from space. A satellite took this picture. Thumbs Up if you remember what a satellite is.

TEACHER DO: Choose one student with **Thumbs Up** to explain.

TEACHER SAY: Thank you for reminding us what a satellite is. Now let's look at the picture. Why do you think there are different colors?

TEACHER DO: Let students guide the discussion. Point out the land, water, clouds, and ice in the picture as students identify them.

 **STUDENTS DO:** Discuss observations of the picture.

TEACHER SAY: Our planet Earth has a lot of water on its surface. There is also water in the air. In this picture, we can actually see water in all three forms. Please take some Think Time to find examples of each form.

 **STUDENTS DO:** Use **Think Time** to identify water in three forms.

TEACHER SAY: Please talk to your Shoulder Partner about where you see water as solid, liquid, and gas. We will share with the class in a few minutes.

 **STUDENTS DO:** Share observations with **Shoulder Partner**.

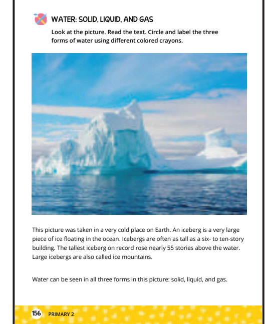
TEACHER DO: Use **Calling Sticks** or raised hands to ask students to identify water in all three forms in the picture.

Note to Teacher: It is a bit difficult to see the ice in Antarctica, because there are clouds shown on the image, so students may need some help locating it in the picture.

 **STUDENTS DO:** Share ideas.

TEACHER SAY: Very good observations. There is a lot of liquid water on Earth. In fact, most of the surface of the Earth is covered with liquid water. Remember as we look at this picture, we are only looking at one half of the Earth. We cannot see the other side, where there is also a lot of liquid water. There is also vapor in the form of clouds, and ice in the form of glaciers. I have one more question: Can you find Egypt in this picture?

 **STUDENTS DO:** Locate and point to Egypt.


CHAPTER 3 MONUMENTAL DESIGNS

WATER: SOLID, LIQUID, AND GAS

Look at the picture. Read the text. Circle and label the three forms of water using different colored crayons.

This picture was taken in a very cold place on Earth. An iceberg is a very large piece of ice floating in the ocean. Icebergs are often as tall as a six- to ten-story building. The tallest iceberg on record rose nearly 55 stories above the water. Large icebergs are also called ice mountains.

Water can be seen in all three forms in this picture: solid, liquid, and gas.

156 PRIMARY 2

3. TEACHER SAY: We have been looking at a picture of the Earth from far away in space. Now let's look at picture taken on Earth that shows water in all three forms. Please open your student book to Water: Solid, Liquid, and Gas. Before we read the directions, I have a thinking question for you: What do you know about the temperature in this place just from looking at the picture?

 **STUDENTS DO:** Use **Think Time**, then share ideas.



TEACHER SAY: Now, read the directions and work by yourself on this page.

 **STUDENTS DO:** Work independently to complete the task.

TEACHER DO: Walk around the room and encourage students to label with solid, liquid, or gas as appropriate. You may wish to modify the task by allowing students to work with partners, or you

may need to support individual students with additional modifications.

Note to Teacher: This task can be used as a formative assessment to ensure students understand the three forms water.

TEACHER SAY: **This is a very interesting picture. It was taken far away from here, in a place that is much colder than Egypt. Look at the picture and point to the water in the solid form. Does anyone know what this type of ice formation is called?**

TEACHER DO: Choose students who are willing to respond.

TEACHER SAY: **This type of formation is called an iceberg. Big chunks of ice in the ocean are called icebergs.**

TEACHER DO: Write the word "iceberg" on the board.

TEACHER SAY: **Now look at the picture and point to the water that is in gas form. Where is the water in gas form in this picture?**

TEACHER DO: Use **Calling Sticks** until correct answer is given.

4. TEACHER SAY: **Very good. These puffy clouds are made of water vapor. We have found water in all three forms—solid, liquid, and gas—in this picture. We have been talking about the properties of different materials. How would you describe the liquid water in this picture?**

TEACHER DO: Use **Popcorn** to get a rich description.



STUDENTS DO: Share ideas and **Popcorn**.

TEACHER SAY: **I wonder if all the liquid water on Earth is the same. What do you think?**





TEACHER DO: Use **Calling Sticks** to choose students to respond. Prompt students to include evidence and reasoning in their answers and build off each other's ideas.

STUDENTS DO: Share ideas.

5. TEACHER SAY: **You did a wonderful job describing the liquid water in the picture. One thing you may not know is that the liquid water in this picture is part of an ocean. What else do you know about how to describe the water now that you know it is an ocean?**

TEACHER DO: Lead a discussion about the properties of the ocean water (wet, cold, deep, blue, salty), leading the students to the realization that ocean water is salty water.



STUDENTS DO: Share ideas.

TEACHER SAY: **Our oceans are salty. We call the water salt water. Water that does not have much salt in it, like in our rivers and lakes, is called fresh water. How does salt water compare to fresh water? What are the uses for each?**

TEACHER DO: Lead a discussion about salt water versus fresh water, being sure to cover that you cannot drink salt water or use it for watering crops. You can, of course, go swimming, fishing, and boating in both.



STUDENTS DO: Share ideas about uses of salt and fresh water.

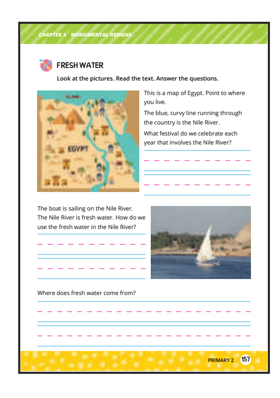
TEACHER SAY: **Where do we find naturally occurring fresh water on Earth?**

TEACHER DO: Lead a discussion about where fresh water is found (lakes, rivers, underground).



STUDENTS DO: Share ideas.

6. TEACHER SAY: **Please open your student books to Fresh Water and read the directions.**


CHAPTER 3 MONUMENTAL DESIGNS

FRESH WATER

Look at the pictures. Read the text. Answer the questions.

This is a map of Egypt. Point to where you live.

The blue, curvy line running through the country is the Nile River.

What festival do we celebrate each year that involves the Nile River?

The boat is sailing on the Nile River. The Nile River is fresh water. How do we use the fresh water in the Nile River?

Where does fresh water come from?

PRIMARY 2 157

 **STUDENTS DO:** Find the page and read the directions.

Note to Teacher: While the directions below call for students to complete the work independently, you may wish to modify to support the needs of your students. For example, you may allow students to work in partners or small groups, or you may lead the discussion with specific sets of students.

TEACHER SAY: **The first picture is a map of Egypt. Look carefully at the map. Thumbs Up if you can find the pyramids in the map.**

 **STUDENTS DO:** Look at the map and respond **Thumbs Up**.

TEACHER DO: Display a larger map of Egypt in the front of the room. Make sure it clearly shows the region/area where your community is located.

TEACHER SAY: **I have a map of Egypt, too. Please raise your hand if you can point to where we live on the map of Egypt.**

 **STUDENTS DO:** Raise hands to volunteer.

TEACHER DO: Choose a student with a raised hand to show the class where they are on the map. Prompt students to point to roughly the same location on the map in the student book. Walk around to help the students understand how to look at the map.

TEACHER SAY: **Read the text next to the map and write your answer to the question in your student book.**

 **STUDENTS DO:** Read and answer the question.

TEACHER DO: Give students ample time to read the text and answer the question. When the students have finished, remind them about Wafaa El-Nil, focusing on the historical importance of the flooding of the Nile River. Point out that the flooding provided fresh water for growing crops, which was (is) essential for growing food.

TEACHER SAY: **Now look at the second picture in your student book. Please read the text with your Shoulder Partner and write the answer to the next question in your student book.**

 **STUDENTS DO:** Discuss with **Shoulder Partner** and answer question.

TEACHER DO: Walk around, prompting students to think of all the ways that we use fresh water, such as drinking, cooking, bathing, watering crops, swimming, fishing, and so on.

TEACHER SAY: **Let's Popcorn the ways we use fresh water.**

TEACHER DO: Choose one student to start the discussion, then **Popcorn**.

 **STUDENTS DO:** Share ideas and **Popcorn**.

TEACHER SAY: **Those are very good ideas. We use fresh water in many ways. Remember, we said that most of the Earth's surface is covered by the oceans. Are the oceans fresh water or salt water?**

TEACHER DO: Prompt students to answer using **Number Sign**, with one finger for "fresh water" and two fingers for "salt water."

TEACHER SAY: **Yes, the oceans are salt water. But humans need a lot of fresh water, not salt water. I wonder where we get fresh water. Please read the last question with your Shoulder Partner and write the answer in your student book.**

 **STUDENTS DO:** Discuss with **Shoulder Partner** and answer question.

TEACHER DO: Give students enough time to think and discuss this important question.

TEACHER SAY: **Let's Popcorn again to find out where fresh water comes from. I will make a**

list on the board.

 STUDENTS DO: Share ideas and **Popcorn**.

TEACHER DO: Choose the first student, continue with **Popcorn**, and make a list on the board. Be sure to include natural sources like rivers, lakes, underground springs, and rain. Students may also offer suggestions such as water fountains, the store, and so on. Accept all reasonable answers.

6. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: These are all good ideas. All of these places have fresh water, but even added all together, they do not contain nearly as much water as the oceans. We learned a lot about water today in class. Please get in your groups to discuss: What is one new thing you learned today?

 STUDENTS DO: Discuss new information learned.

TEACHER SAY: Thank you for all of your hard work today as we learned about water. Water is such an important part of our life.

Lesson 5 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Describe how temperature can change the properties of a material. • Predict how weather affects natural and human-made objects. • Describe the how the properties of materials impact their use for building.	• Reversible	• Student book • Pencils • Crayons • Chart paper or board • Markers

LIFE SKILLS

Learn to Know

Critical Thinking:

- Define relationships between different objects.

Creativity:

- Organize parts to form a new or unique whole.



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson.

TEACHER SAY: **In our last lesson, we discussed a picture of the Earth taken from space. Let's review what we have been learning. Please raise your hand if you know how we get pictures from space.**

TEACHER DO: Choose a few students to respond to form a complete description. Encourage the use of the word "satellite."

 STUDENTS DO: Share ideas.

TEACHER SAY: **We saw a lot of water on the Earth in the satellite picture. Where is most of the water on Earth?**

TEACHER DO: Use Calling Sticks to choose students.

 STUDENTS DO: Share ideas.

TEACHER SAY: **Thumbs Up if we can drink the water in the oceans.**

 STUDENTS DO: Respond.

TEACHER SAY: **We cannot drink water straight from the oceans. What kind of water is in the oceans?**

TEACHER DO: Choose a student with a raised hand to respond until the correct answer is given (salt water).

TEACHER SAY: Indeed, we cannot drink salt water. It will make us sick. We need fresh water for drinking. I can see you have been learning in our class. Over the last few lessons, we have been talking about the three forms of water and other materials. What are those three forms?

TEACHER DO: Use **Calling Sticks** to choose students to list the three forms that materials can take. Write them on the board in a list as the students mention them (solid, liquid, gas).

TEACHER SAY: Who remembers what we call water in each of the three forms?

TEACHER DO: Use **Calling Sticks** to choose students to answer, recording names on the board next to the forms (solid is ice, liquid is water, gas is water vapor/steam).

TEACHER SAY: Very good. We also talked about what makes water change from one form to another. Who can help us remember how water changes form?

 **STUDENTS DO:** Share ideas.

TEACHER DO: Lead a discussion on how a change in temperature can change the form of water. Review and re-teach as needed. Be sure to discuss heating (including melting and boiling) and cooling (freezing).

2. TEACHER SAY: I wonder, can we reverse the changes for water? For example, we put liquid water in the freezer to make ice. Can we make liquid water from ice?

TEACHER DO: Use **Calling Sticks** to choose students to respond. Prompt for reasoning.

 **STUDENTS DO:** Share ideas.

TEACHER SAY: Yes, for water we can freeze liquid to make ice, then warm the ice to make liquid again. Do you think we can always reverse a change in form from temperature? What examples and exceptions can you think of?

TEACHER DO: Use **Brainstorm** to gather ideas and examples.

 **STUDENTS DO:** Share ideas.

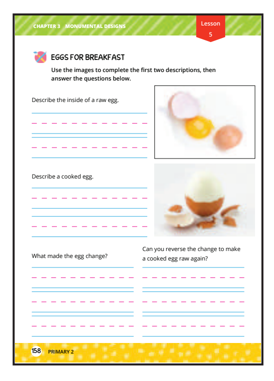


Note to Teacher: The purpose of a **Brainstorm** *is to list many answers, not to critique whether answers are realistic, feasible, or correct. Once an initial broad list is made, students can go back to answers to prioritize or eliminate some options. This strategy promotes creativity and problem solving.*

TEACHER SAY: Let's consider an example. We have been learning to describe properties. I have a thinking question for you. When we crack open a raw egg, what is it like inside?

 **STUDENTS DO:** Use **Think Time**.





3. TEACHER SAY: Please open your student books to Eggs for Breakfast. Read and follow the directions on your own. Be detailed in your descriptions and think carefully about your responses.

 **STUDENTS DO:** Complete the page independently.

TEACHER DO: Give students ample time to complete the page. While students are working, write on the board:

Liquid →Solid	Solid → Liquid
Water → Ice Raw Egg →Cooked Egg	Ice → Water Cooked Egg ?→? Raw Egg

TEACHER SAY: Thank you for thinking about what happens to the eggs we have for breakfast. Please compare your responses with your Shoulder Partner. Explain to each other why you responded as you did.

 **STUDENTS DO:** Work with **Shoulder Partner** to compare responses.

TEACHER DO: Once students have shared with a partner, lead a discussion comparing the properties of a raw egg and a cooked egg. Encourage students to explain how the liquid raw egg became a solid cooked egg (heating/cooking, temperature change).

 **STUDENTS DO:** Share ideas.

TEACHER SAY: Look at the table I have written on the board. We are going to compare what happens to the egg with what we know about water. What has to happen to liquid water to make ice?

TEACHER DO: Use **Calling Sticks** to choose students until the correct answer is given (lower the temperature). Write the answer next to the line "Water ☐ Ice."

 **STUDENTS DO:** Share ideas.

TEACHER SAY: What do we call the process of changing from water to ice?

TEACHER DO: Use **Calling Sticks** to choose students until the correct answer is given (freezing).

TEACHER SAY: Please look again at the table I have written on the board. What has to happen to the liquid raw egg before it becomes a solid egg?

TEACHER DO: Use **Calling Sticks** to choose students until the correct answer is given (raise the temperature). If students offer "cook it," prompt them to consider temperature.

 **STUDENTS DO:** Share ideas.

TEACHER SAY: What is the difference between making liquid water into solid ice and making a liquid raw egg into a solid egg?

 **STUDENTS DO:** Share ideas (one requires a temperature decrease and one requires a temperature increase). Both require a temperature change.

TEACHER SAY: Let's look again at the table in the other column. What has to happen to solid ice before it becomes liquid water?

TEACHER DO: Use **Calling Sticks** to choose students until the correct answer is given (raise the temperature). Write the answer next to the line "Ice → Water."

TEACHER SAY: What do we call the process of going from ice to water?

TEACHER DO: Use **Calling Sticks** to choose students until the correct answer is given (melting).

 **STUDENTS DO:** Share ideas.

TEACHER SAY: Please look again at the table I have written on the board. What do you think needs to happen to the cooked egg to make it a liquid raw egg?

 **STUDENTS DO:** Share ideas.

TEACHER DO: Choose students with raised hands. (See note below.)

Note to Teacher: Since you cannot reverse the cooking process, this question is intended to make the students think. Gently dissuade any answers that might be given.

TEACHER SAY: Let's use Number Sign to answer the last question from your student book: Can you reverse the change to make a cooked egg raw again? One finger for "yes" and two

fingers for "no."

 STUDENTS DO: Share ideas.

TEACHER SAY: **Indeed, we cannot go backward from a cooked egg to a raw egg.**

TEACHER DO: Cross out that line in the table.

TEACHER SAY: **When you cook an egg, the heating causes a change in the material that cannot be reversed. This is true for many items that are cooked.**

TEACHER DO: Next to the "Raw Egg → Cooked Egg" line in the table, write, "not reversible."

4. TEACHER SAY: **Heating AND cooling can sometimes change the properties of the materials and create something totally new. Sometimes mixing certain materials together also creates something new. Can you think of a recent example we observed of mixing things together to create something new?**

TEACHER DO: If needed, help the students remember the balloon inflating when the vinegar and baking soda mixed. Encourage students to identify the new material as the gas that blew up the balloon.

 STUDENTS DO: Share ideas.



TEACHER SAY: **Sometimes the changes are reversible, and sometimes they are not. Cooking an egg is a change that cannot go backward. Think about some other substances that change with temperature. Maybe you are thinking about other foods that you eat. Let's talk about whether you can reverse changes that take place with increased or decreased temperature.**

TEACHER DO: Encourage discussion.

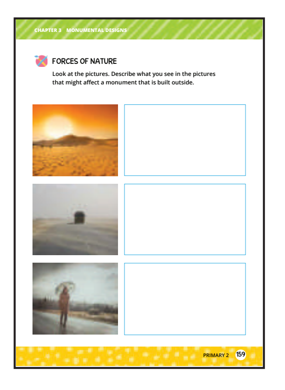
Note to Teacher: There are complex science issues that involve chemical and physical changes that are better left for future study, but students should be able to reason through some simple ideas. For example, ask students to consider an ice cream cone that melts on a hot day. Can you take the liquid and re-freeze it into a frozen treat? Encourage creativity of thought. Students may suggest changes that include additional forces that are more complex than heating and cooling, and that is okay. The learning indicator asks students to describe observable changes that are based on heating and cooling.

 STUDENTS DO: Share ideas.

5. TEACHER SAY: **This has been a very interesting discussion. Thank you for all of your ideas. We have been learning about properties of materials and about how materials can change. This will help us build a monument for our Share project. We need to consider the properties of materials before we use them to build things. Since monuments are built outdoors, we also need to consider how the weather will affect them over time. We have been learning about how heat can melt ice. I wonder, does the heat from the sun melt rocks?**

 STUDENTS DO: Share ideas.

TEACHER DO: Lead a discussion about what materials can withstand the heat from the sun. Prompt students to consider what would happen if a monument was made out of ice in Egypt.


FORCES OF NATURE

Look at the pictures. Describe what you see in the pictures that might affect a monument that is built outside.

TEACHER SAY: **So, we see that heat from the sun is a factor in choosing materials to build monuments. Let's consider other things that may affect our building materials. Please turn to Forces of Nature in your student book.**

 READ ALOUD: **Look at the pictures. Describe what you see in the pictures that might affect a monument that is built outside.**

TEACHER SAY: **Please work with your Shoulder Partner to list things that might affect a monument that is built outdoors. Write your ideas in your student book.**

 STUDENTS DO: Work with **Shoulder Partner** to complete student page.

TEACHER DO: When students have finished, regain their attention and lead a discussion about what they saw in the pictures that may affect a monument built outdoors (wind, rain, heat/sun, cold). Encourage discussion about various effects.

6. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: Thank you for all of your contributions to our class discussion today. We have been learning about the materials that make up the world around us. Please get together in your groups to discuss why we should choose building materials to withstand the forces of nature over time.

 **STUDENTS DO:** Discuss in groups.

TEACHER SAY: I really appreciate all of your work today. In our next lesson, you will begin to apply these ideas to building monuments.

Lesson 6 Overview

LEARNING OUTCOMES
Students will: • Name and describe monuments found in Egypt. • Specify attributes of shapes and patterns. • Create patterns using shapes and lines. • Explain use of requirements in design thinking.

PREPARATION
If available, bring in pictures of local monuments that students may already know. Have shape templates available for use or other manipulatives that students may use to draw shapes in patterns.

KEY VOCABULARY
• Design • Monument • Requirement

MATERIALS
• Student book • Pencils • Crayons • Chart paper or board • Markers • Shape manipulatives (squares, rectangles, triangles, and so on) • Extra blank paper for student pattern practice

LIFE SKILLS	
Learn to Work	Learn to Be
Productivity: • Setting clear goals.	Communication: • Good listening.



Learn (90 minutes)

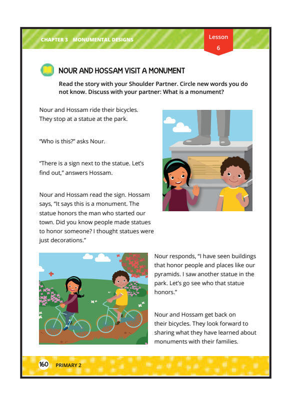
Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen.

TEACHER SAY: **We have learned about materials and their forms. Today we will use what we know about materials to make plans to build something. We have already talked about human-made objects. Our student leader today will lead a discussion on the following question: What are some of the materials we use to make objects?**



STUDENTS DO: Share ideas, led by student leader.



CHAPTER 3 MONUMENTAL DESIGNS — Lesson 6

NOUR AND HOSSAM VISIT A MONUMENT

Read the story with your Shoulder Partner. Circle new words you do not know. Discuss with your partner: What is a monument?

Nour and Hossam ride their bicycles. They stop at a statue at the park.

"Who is this?" asks Nour.

"There is a sign next to the statue. Let's find out," answers Hossam.

Nour and Hossam read the sign. Hossam says, "It says this is a monument. The statue honors the man who started our town. Did you know people made statues to honor someone? I thought statues were just decorations."

Nour responds, "I have seen buildings that honor people and places like our pyramids. I saw another statue in the park. Let's go see who that statue honors."

Nour and Hossam get back on their bicycles. They look forward to sharing what they have learned about monuments with their families.

160 PRIMARY 2

2. TEACHER SAY: **Thank you for leading our discussion. You already know that you will be making a model of a monument as part of your Share project. Let's read a story to help us think about monuments. Please open your student book to Nour and Hossam Visit a Monument.**

TEACHER DO: Use Calling Sticks to choose a student to read the directions. You may wish to read some or all of the story aloud with the class.

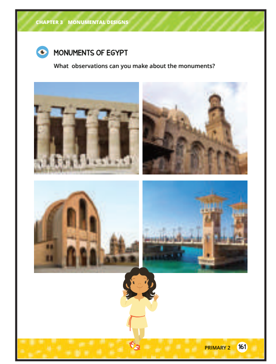


STUDENTS DO: Read directions, then read the remainder of the story, following the directions given.

TEACHER SAY: **As you read and share with your Shoulder Partner, please keep your voices low so everyone can easily hear each other.**

TEACHER DO: If students are unable to define "monument," define it for them. Explain that it is a structure that honors a special person or event that is important in history. Clarify as needed. Be prepared to share any available photos of local monuments.

- Continue the discussion to find out what students already know with such questions as:



- Can anyone tell us about a monument you know and what it represents?
- Are there any monuments in our community?
- Where have you seen monuments?

 **STUDENTS DO:** Share ideas and prior knowledge of monuments.

3. TEACHER SAY: Monuments come in many forms. Let’s turn in our student books to the page, Monuments of Egypt. There are two pages of pictures for you to look at. Read and follow the directions. Take time to talk with your Shoulder Partner about what you notice.

 **STUDENTS DO:** Talk about the structures.



TEACHER DO: Go through the pictures in the student book with the students. Identify each monument and who or what it recognizes. Share any history you may know about the monuments. Share any photos you may have brought in of local monuments.

- Top left: Temple Karnak at Luxor (largest religious building ever made)
- Top right: Al-Muizz li-Deen Illah (largest medieval collection in the Islamic world)
- Bottom left: St. Mark's Coptic Orthodox Cathedral, Abbassiyya, Cairo

TEACHER SAY: What materials do you see that were used to build these monuments? Do you see bricks, wood, concrete? Can you identify solids and liquids too? Share your ideas with your Shoulder Partner.

 **STUDENTS DO:** Share observations.



TEACHER DO: Ask students to share what *their* **Shoulder Partner** has said about the pictures. Note that trees and shrubs are also part of the design of the monument, so these can be considered materials as well.

 **STUDENTS DO:** Share each other’s ideas.

4. TEACHER SAY: Now, let’s look at these monuments in a different way. When designing buildings, statues, and fountains, people use shapes and patterns. Before we look at the pictures again, who can remind us what a pattern is?

 **STUDENTS DO:** Share ideas.

Note to Teacher: Recognizing patterns is a core concept in computational thinking as well as art and math. Extend this conversation to include a broader understanding of patterns if time allows. As students design their own patterns, reinforce computational thinking by asking students to articulate how they might provide instructions to someone else on how to create their pattern. Encourage use of efficiency in the instructions, such as, “Draw two triangles, then one square. Repeat.”

TEACHER SAY: Now look at the pictures with your group. Turn and Talk at your table about the shapes and patterns you see in the pictures.

 **STUDENTS DO: Turn and Talk** to identify shapes and patterns.

TEACHER SAY: Let’s Hands Up, Pair Up to share some of the shapes and patterns you see. We will share ideas with two other friends, so remember to thank each other when I ask you to change partners.

 **STUDENTS DO:** Find a new partner and share patterns found in the pictures.

TEACHER DO: Walk around, listening to discussions. After students have had the chance to talk with two friends, ask students to return to their seats.

TEACHER SAY: In our story with Nour and Hossam, they learned that monuments show honor. How do you think the monuments in these pictures are honoring someone or something?

 **STUDENTS DO:** Share ideas.

Note to Teacher: The emphasis in this chapter's Share project is on understanding the physical structure of monuments as well as their symbolism and significance. Spend time in this discussion exploring the importance of monuments (both local and those shown in the book) to Egyptian and local culture.

5. TEACHER SAY: We have looked at patterns in our pictures. Let's do a pattern hunt now. We will think about where we see patterns in our classroom first.

TEACHER DO: Give an example of a pattern in your classroom or in your building where students can readily see it. This could be the pattern of windows on both sides of a room, placement of doors in the hallway, or the location of desks and bookshelves in your room. Other examples are stone or wood carving or paper borders on walls. Have students identify patterns they see. Share pictures of local monuments or take students outside to see patterns and shapes in and around the school buildings or in the neighborhood. Focus on shapes of windows and doorways, colors used, materials used, and placement.

 **STUDENTS DO:** Identify patterns in the surrounding environment.

TEACHER SAY: It is fun looking for shapes and patterns around us. Let's practice creating our own patterns that we might use in our monument design. Use two or three shapes to create a pattern.

TEACHER DO: Hand out manipulatives of two or three shapes that students can use to make patterns. If none are available, students can draw patterns with shapes. This will serve as a time for informal assessment as you watch students create original patterns.

 **STUDENTS DO:** Create one or more original patterns.

6. TEACHER SAY: Thank you for closely observing monuments to think about their designs. The design of a monument includes the materials used; the subject being honored; and patterns of shapes, lines, and color. We will think about these as we begin to plan our monuments. First, let's find out more about our project. Please turn to the next page in your student book, Request for a New Monument. Once you find the correct page, read the directions to yourself.

 **STUDENTS DO:** Find page and read directions.

TEACHER SAY: "Requirements" is a new word for us. Let's see if we can find out what it means.

TEACHER DO: Read the first paragraph of the letter in the student book aloud or call on a student to read it. Then skip the list and read or assign a student to read the bottom paragraph aloud.

TEACHER SAY: Turn and Talk. Explain what a REQUIREMENT is in your own words.

 **STUDENTS DO:** Explain understanding of a requirement to a partner.

Note to Teacher: Designing an artifact to meet user requirements is an important concept in computational thinking. Emphasize the shift from being creative according to internal standards and ideas to considering what a user or requester is asking for in order to reinforce this computational thinking skill.

TEACHER SAY: Who would like to share your understanding of the word, "requirement?"



TEACHER DO: Choose two or three students to explain their understanding.

TEACHER SAY: Let's look over the requirements the town group gives us for building our monuments. Read along with me. We will discuss each briefly, so we understand.

*Note to Teacher: As you read, explain each requirement. The second one may need more thought and discussion about how to add water or gas to a monument. Tell students water (possibly as a fountain) and gas (possibly as balloons or steam) will not necessarily be included in building their **models**, but they can describe how it will be used. Make sure that students know what materials are available to them.*

TEACHER SAY: Now that we have an idea of what we will be doing in our next lesson, we will be ready to begin planning. Please put away your student books and prepare for our closing.

7. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: I will choose a student to lead our closing discussion using Calling Sticks. Our discussion question is: How will requirements help us when we plan our monument?

TEACHER DO: Choose a student to lead. Help student leader as needed. This should become a conversation that shows students understand how to use requirements.

 **STUDENTS DO:** Lead and participate in discussion.

TEACHER SAY: Thank you for all of your hard work today. In our next lesson, we will begin to plan for building our monuments.

Lesson 7 Overview

LEARNING OUTCOMES

Students will:

- **Brainstorm** ideas for a monument.
- Plan for design of a monument using requirements.
- Apply knowledge of material properties to monument design.

PREPARATION

Decide if students will work individually or in groups to design and build monument **model**s. Individually is preferred if there are enough supplies available. If working in groups, students should be seated in groups from the beginning of the lesson. Be prepared to show students the supplies they will use to make their monuments. If using **model**ing clay, it is suggested that each student makes his/her own monument.

KEY VOCABULARY

- **Brainstorm**
- Design
- Plan
- Requirements

LIFE SKILLS

Learn to Work

Collaboration:

- Respect for other opinions.

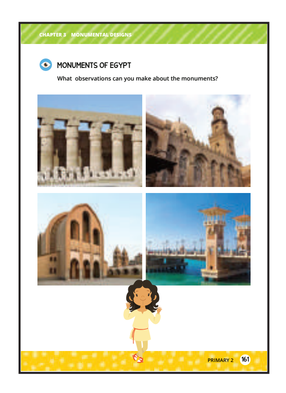
MATERIALS

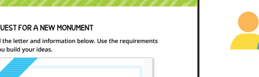
- Student book
- Pencils
- Crayons or colored pencils
- Ruler
- Various materials for making **model** monuments



Learn (90 minutes)

Directions





CHAPTER 3 MONUMENTAL DESIGNS

REQUEST FOR A NEW MONUMENT

Read the letter and information below. Use the requirements as you build your ideas.

Dear class,

Our town group is planning a new small park. We would like to create a monument in the middle of the park to honor an important local person or event. We need your help in designing the monument. We have provided our requirements below. We look forward to seeing what you can imagine and design.

The monument must:

1. Use at least 2 different materials.
2. Include at least 2 forms of materials: solid, liquid, or gas.
3. Include at least 3 shapes.
4. Showcase 1 pattern.
5. Model must be between 10 and 15 cm tall.

A requirement is something that needs to be true of a design. Requirements guide our design and must be included in planning our monument. Design thinking helps us make sure our ideas meet the expectations of the requester.

PRIMARY 2 163

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen.

Note to Teacher: Prior to continuing with the lesson, make certain students are aware of the materials available to make the monuments.

TEACHER SAY: One of the requirements for our monuments is to use two forms of materials. Let's do a quick review. I will name a form—solid, liquid, or gas. Go around your group as quickly as you can naming things that are in that form. For example, if I hear the word, "solid," I might say "rock." The person who is the shortest in your group will begin. Are you ready?

TEACHER DO: Give students ample time to answer after naming each form.

2. TEACHER SAY: Thank you for cooperating so well. Before we begin planning our monuments today, let's look at the pictures of monuments we saw earlier. Turn in your student book to review Monuments of Egypt. Talk to your group about what these monuments honor.

STUDENTS DO: Discuss monuments with group.

TEACHER DO: Listen to students' understanding of monuments at this time. If needed, review monuments by having students explain who or what is honored by each monument. Bring students together for group discussion.

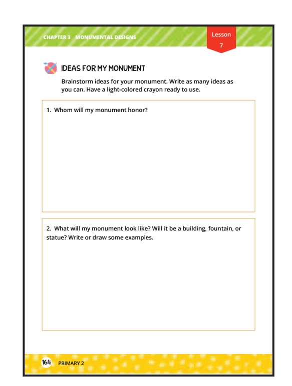
TEACHER SAY: A monument can be small like a statue, or it can be large like a building. It can even be a tower. A monument can be many things. Today our goal is to plan our monuments so we will be ready to build in our next lesson. The first thing we need to do as we start planning is review the requirements we have been given. Turn in your student books to Request for a New

Monument. When you find the correct page, review the list of requirements with your Shoulder Partner.

 STUDENTS DO: Review requirements with **Shoulder Partner**.

TEACHER SAY: **Are there any questions about the requirements listed?**

 STUDENTS DO: Ask questions for clarification.


CHAPTER 3 MONUMENTAL DESIGNS
Lesson 7

IDEAS FOR MY MONUMENT

Brainstorm ideas for your monument. Write as many ideas as you can. Have a light-colored crayon ready to use.

1. Whom will my monument honor?

2. What will my monument look like? Will it be a building, fountain, or statue? Write or draw some examples.

164 PRIMARY 2

3. TEACHER SAY: **Excellent. I think we are ready to begin. We know that monuments help us remember a person or an event. Our next steps is to think about a person or event that we would like to honor or remember. This can be an important person or event we have heard about. For this project, it can also be an important person in our own lives. Let's Brainstorm some ideas to get started. Open your student book to the next page, Ideas for My Monument. You will need a pencil and a light-colored crayon.**

 STUDENTS DO: Find a pencil and a light-colored crayon.

TEACHER DO: Choose a student to read the directions aloud.

TEACHER SAY: **Thank you for reading for us. Think about an important person or event that you would like to honor. Write as many ideas as you can think of in the first oval.**

TEACHER DO: If students need support, use guiding questions such as:

- Who is an important person in Egypt's history (or in our town)?
- What event has been important to Egypt (or to you)?
- Do you have enough information about the person or event to make something that will represent them?

 STUDENTS DO: Use **Think Time** to **Brainstorm**.

TEACHER SAY: **Now that you have many ideas, let's decide which person or event you will honor. Read over your list and choose one idea. Highlight or color over the idea with your crayon. When you finish, put your crayon down, and I will know you are ready.**

 STUDENTS DO: Highlight chosen person or event.

TEACHER SAY: **The next question asks what the monument will look like. A monument often represents in some way the person or event it honors. Let me give you an example. If I want to honor a person who sailed down the Nile many years ago, I may decide to make a monument that looks like a boat or a sail. The requirements state that I need to use three shapes. One of my shapes will be a triangle for the sail. For my two different forms, I could place the solid boat on water (a liquid), or the sail can be pushed by air (a gas). Now it is your turn. Work individually on this part. Write or draw your ideas in the oval at the bottom of the page.**

TEACHER DO: If you would like to add another (more personal) example, suggest that a monument to a grandmother might be in the shape of a tea kettle that has steam rising out of it once a day. As students work, pose such questions as:

- What is your person known for doing?
- Where did your event take place?
- Can you make a monument out of the materials we have available?
- What shapes can you use to make the monument?

 STUDENTS DO: **Brainstorm** and record ideas.



TEACHER SAY: **Let's get some help from a friend. Turn to your Shoulder Partner and share your ideas. This is a time to help each other Brainstorm.**

Note to Teacher: If working in groups, ask what other ideas the group has. Guide students to talk about what would be the best to make as a group. What could each student do to help build the monument? At this age, students may need more structure for group work. You may decide to assign roles, or divide up the work in different ways to support positive collaboration between your students.

TEACHER SAY: I always appreciate it when someone helps me with my ideas. Did you remember to thank your partner?



STUDENTS DO: Thank partners.

TEACHER SAY: Now it is time to choose one idea. Use your crayon to color or highlight the type of monument you will make.

Note to Teacher: If working in groups, ask students to vote on the choice.

3. TEACHER SAY: We know our requirements, so let's begin our plan. Turn to the next page, Planning My Monument.

TEACHER DO: Call on one student to read the directions, then new students to read each question.



STUDENTS DO: Read and follow along.

TEACHER SAY: Thank you all. Before you begin completing each section, let's continue to the next page, Drawing My Monument, so when you finish the questions you can move on without waiting. After you write about your plan, draw it so that you can see and share what your idea will look like.

TEACHER DO: Choose a new student to read the directions.

Note to Teacher: If in groups, students should decide together which monument they will make and have a shared vision of what it will look like.

TEACHER SAY: I will be walking around to help you if needed. I look forward to seeing your monument ideas. Remember to add details in your drawing. You will use your drawing to build your monument in the next lesson.

TEACHER DO: As students work, walk around the classroom, encouraging and asking questions as needed. If work is unclear or underdeveloped, ask questions to guide students' thinking. If some students finish early, allow them to help others if appropriate.

4. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: You have learned a lot about the words "monument" and "requirements" today. Let's take this time to make sure we remember this vocabulary. Turn to the next page in the student book, Vocabulary: Requirement. Read the directions to yourself and then complete the page. Work individually to complete the pages.

TEACHER DO: Remind students to thank those who have helped them today.

Lesson 8 Overview

LEARNING OUTCOMES

Students will:
- Use a checklist to record progress on given task.
- Build a monument that honors a person or event.
- Define and explain importance of tourists.

PREPARATION

Have supplies ready for students to build monuments. Make a space for students to pick up their own materials or, if using clay, give each student the same amount. If you have a ticket(s) from a monument you have visited, bring to share with students.

KEY VOCABULARY

- Internet

LIFE SKILLS

Learn to Work

Productivity:
- Setting clear goals.

MATERIALS

- Student books
- Ruler
- Pencils
- Paper
- Various materials for building monument models



Learn (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen.

TEACHER SAY: **Before we get ready to build our monuments, let's review our project rubric. Turn to the page in the student book, My Self-Assessment. Read the directions with your Shoulder Partner, and then read the rubric together.**



STUDENTS DO: Work together to understand rubric.

TEACHER DO: Discuss the rubric so students clearly understand the expectations.

2. TEACHER SAY: Today will be a busy day for us as we make our monuments. Why do you think monuments are important to us in Egypt and around the world?

TEACHER DO: Choose a student to lead the discussion using **Calling Sticks**.



STUDENTS DO: Discuss the importance of monuments.

TEACHER SAY: **Thank you for leading our discussion. I enjoy hearing everyone's ideas. When I visit monuments, I often see tourists. What is a tourist?**



STUDENTS DO: Share ideas.

TEACHER SAY: **Yes, a tourist is a person who visits our country or our community from a different place. Tourism is very important in Egypt. Why do you think it is important to bring tourists to Egypt?**



STUDENTS DO: Share ideas.

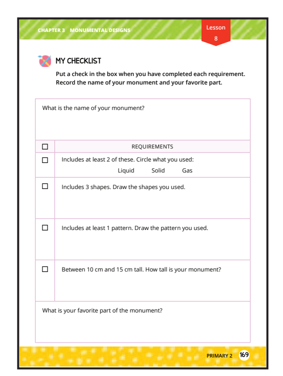
TEACHER SAY: **Yes. We are proud of our country and want others to see it and to understand Egypt. What do our monuments teach us and others?**

TEACHER DO: Invite discussion about the importance of monuments.

TEACHER SAY: We would like people to visit and learn from the monuments we build as well. Okay, let's get ready to build. Turn to the student book pages that show our plans. Take some time to look over your plan by yourself. If you see something that needs to be changed, change it now.

STUDENTS DO: Review and adjust plans as needed.




CHAPTER 3 MONUMENTAL DESIGNS

MY CHECKLIST

Put a check in the box when you have completed each requirement. Record the name of your monument and your favorite part.

What is the name of your monument?

	REQUIREMENTS
☐	Includes at least 2 of these. Circle what you used: Liquid Solid Gas
☐	Includes 3 shapes. Draw the shapes you used.
☐	Includes at least 1 pattern. Draw the pattern you used.
☐	Between 10 cm and 15 cm tall. How tall is your monument?

What is your favorite part of the monument?

PRIMARY 2

3. TEACHER SAY: Now turn to the page My Checklist. These are the requirements and the things that need to be complete on your monument. Read over it now with a Shoulder Partner.



STUDENTS DO: Review checklist.

TEACHER DO: Explain any expectations you have for using materials. Review available supplies and how students will collect them. Clarify any questions students may still have.

TEACHER SAY: I think everyone is ready. If you have any further questions, let me know. Use your plans and your checklist to guide you as you work.



STUDENTS DO: Complete monument.

TEACHER DO: Help students as needed. Place the monuments in an area of the room where students can see them and they will not be damaged. When finished, students should clean up their own areas.

4. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: What wonderful monuments. One thing I always do when I visit a monument is save the ticket. Have any of you visited a monument or museum where you were given a ticket?

TEACHER DO: If you have a ticket, display it for students. Allow students to share times they have received a ticket at a monument.



STUDENTS DO: Share experiences.

TEACHER SAY: Tickets are often designed so the tourist or visitor remembers the special place they visited in Egypt. You have all been very creative with your monuments. In our next lesson, we will design tickets for our monuments. If you have a ticket to a monument at home that you would like to share, please bring it for our next lesson. For now, please turn to your Shoulder Partner. Tell why you chose the design of your monument and who or what it honors.



STUDENTS DO: Discuss with partners.

Lesson 9 Overview

LEARNING OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: • Analyze samples of tickets for artistic content. • Design artwork in the form of a ticket for a monument. • Provide creative feedback to others.	• Advertise • Design • Ticket • Tourist	• Colored pencils • Crayons • Rulers (optional) • Pencils • Paper • Student book • Scissors • Glue/tape

PREPARATION

Have available or encourage sharing of tickets to tourist sites. Prepare in advance a page of drawings and sample writings that you might find on a ticket. Cut out your design pieces and be prepared to **model** arranging each to create a ticket. If preferred, students can create the ticket on the computer, using drawing software.

LIFE SKILLS

Learn to Be

Communication:

- Good listening.
- Reading, writing, non-verbal communication skills.



Share (90 minutes)

Directions

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen.

TEACHER SAY: **During our last lesson, we talked about tickets to monuments and sites tourists visit. Did anyone bring a sample of a ticket to share today?**

 STUDENTS DO: Share tickets.

TEACHER DO: Ask questions about shared tickets such as:

- Where did you visit with the ticket?
- What is on the ticket that will help you remember your visit?
- Are there any designs or pictures on the ticket?
- Why did you keep the ticket?

If no one brought tickets to share, begin with: Let's think again about WHY tickets are given.

TEACHER SAY: **Thank you for sharing. Let's think about WHY tickets are given. Who would like to share your ideas?**

 STUDENTS DO: Share ideas.

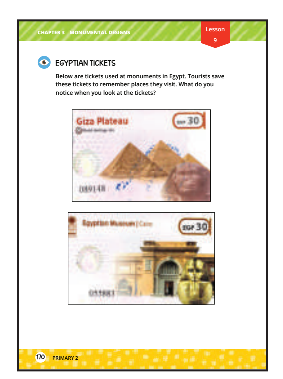
TEACHER DO: Ensure students include reasons such as validating payment, advertising the monument, and keepsake for memory. Add any reasons students do not already know.

2. TEACHER SAY: **One of the reasons we named is advertising. What does it mean to advertise? Who can give us examples of advertisements? Be sure to tell us where you see the advertisements.**

 STUDENTS DO: Share examples of advertisements.

TEACHER SAY: **We remember lots of places because of the advertisements. How are tickets used as advertisements?**

 **STUDENTS DO:** Share ideas.



3. TEACHER SAY: **Yes, when I look at a ticket, I remember my visit. I can also tell someone else about the visit and why it was important to me. Let's analyze some ticket designs. These examples will help us think about our own designs. Turn to the next page in your student book, Egyptian Tickets.**

Note to Teacher: If you have tickets to sites in Egypt or elsewhere, have them available for students to look at.

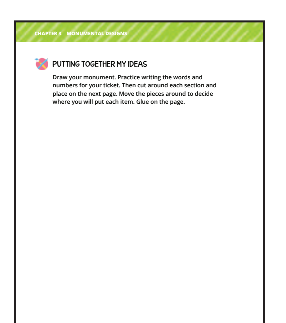
TEACHER SAY: **Read the directions for the page and then look at the tickets. Ask yourself: How do the tickets represent the monument or site? Talk with the others in your group about the colors, shapes, and patterns you see. Describe the artwork and anything else you see on the tickets.**

 **STUDENTS DO:** Work with teams to discuss tickets.

TEACHER DO: Bring students back together and ask questions to spark creativity. Questions may include:

- What is similar about the tickets?
- What colors and patterns do you see?
- What words or numbers are on the tickets? Why are they there?
- What information is included on the ticket?
- What is the first thing you see on the ticket? How is it placed on the ticket to help draw your attention?

 **STUDENTS DO:** Share ideas.



5. TEACHER SAY: **Thank you for closely analyzing the sample tickets. It is time for us to start designing our own tickets. Turn to the next page in your student book, Putting Together My Ideas. Follow along as I read the directions aloud.**

 **READ ALOUD:** **Draw your monument. Practice writing the words and numbers for your ticket. Then cut around each section and place on the next page. Move the pieces around to decide where you will put each item. Glue on the page.**

 **STUDENTS DO:** Follow along as directions are read.

Note to Teacher: Even if students worked together to build a monument, students should work independently to create a ticket.

TEACHER SAY: **This page will help you create your own ticket for your monument. Think about what you want on your ticket. What words, numbers, and objects will be on your ticket? Draw each piece separately so you can move the pieces around until you decide exactly where you want each item on your ticket.**

TEACHER DO: Show students the drawings you created in preparation for the class. Make certain students know they do not need to color the pictures yet. **Model** moving pieces around to create a design. Ask students their preference for where pieces are placed. Tape the pieces in place so students can see how to complete the work.

Note to Teacher: If using a computer program, demonstrate how to move objects around to create a final design.

 **STUDENTS DO:** Watch and advise teacher.

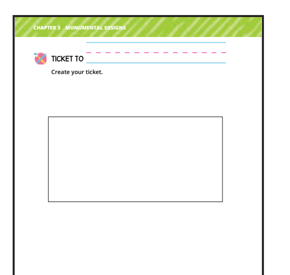
TEACHER SAY: **You will glue/tape your pieces on the next page in the student book, Design Plan. Does anyone have questions on what to do?**

 **STUDENTS DO:** Ask clarifying questions.

TEACHER SAY: **Go ahead and start working on your design. I will call you back together after you've been working for some time to give you final directions.**

TEACHER DO: Walk around, helping students as needed. Allow approximately 15 minutes for students to create their design and then bring them back together for final directions. Pause mid-way through the work time to have students share work with a **Shoulder Partner** and get advice on how to make their designs even better.

STUDENTS DO: Work independently.



TEACHER SAY: **I know many of you are not finished yet, but I see some good design planning so far. Let's learn our final directions now so you can complete your work today. Turn to the next page, Ticket To ________. Read the directions to yourself when you find the page.**



STUDENTS DO: Find page and read directions.

TEACHER SAY: **Once you have finished your design plan, you will be ready to draw your final ticket. Be sure to take time with your drawings and your writing. Then you will color your ticket. If you do not finish your ticket today, you will have some time to finish in our next lesson.**



STUDENTS DO: Continue working on design plan and final ticket.

6. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: **You were so creative today. Please turn to your group and share your ticket, even if you are not finished. I hope to hear compliments being shared as I walk around.**



STUDENTS DO: Share and compliment tickets.

Lesson 10 Overview

LEARNING OUTCOMES	MATERIALS	PREPARATION
Students will: • Relate a story to own learning. • Observe others' work and offer feedback. • Reflect and assess own learning.	• Student-created monument • Student-created ticket • Student book • Pencil	Plan where students will share their monuments and tickets.

LIFE SKILLS

Learn to Be

Accountability:

- Provide effective feedback.



Share (90 minutes)

Directions



CHAPTER 3 MONUMENTAL DESIGNS — Lesson 10

REMEMBERING VISITS

Read the story. Why do you think monuments are important to Hossam and Nour?

Hossam and Nour are at Nour's house. They just returned after visiting monuments and the museum in their town.

Nour says, "I really like the tickets we got at the museum. I want to save mine, just like I saved the tickets of the monuments we visited."

Hossam looks at the tickets. "I like this ticket most of all. It reminds me of the fountain I saw outside of the building."

Nour holds up another ticket. "This is my favorite ticket. I learned so much about the history of our town when we visited this monument. When I look at the ticket, it helps me remember."

Hossam puts his tickets in a small box. "I am putting my tickets in a special place. When I visit new places, I will put the tickets in this box. Then I can remember all the special monuments I have visited."

PRIMARY 2 175

1. Introduction: Use the start of every class to reflect and review previous learning and/or to preview topics for today's lesson. Ask students to think, reflect, share, and listen.

Note to Teacher: Direct students to sit in original monument groups if monuments were made in groups.

TEACHER SAY: **Some of you have not been able to finish your tickets. You will have a chance to work on that now. The rest of us will read our last story in this chapter. When you finish your ticket, join us as we read and discuss the story. Please turn to the page Remembering Visits.**

TEACHER DO: Guide students to read the story individually, with a partner, or aloud quietly. Once finished, have students lead a review of why monuments are important.



STUDENTS DO: Finish tickets or read and discuss the story.

2. TEACHER SAY: **We will now share our monuments and tickets with each other.**

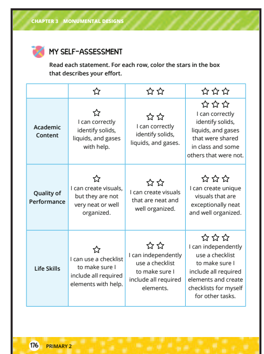
TEACHER DO: Decide where to place students' work so they can do a **Gallery Walk** to view each other's monuments and tickets. Allow time for students to prepare the display of their work. Explain your behavior expectations and the process for the **Gallery Walk**.





STUDENTS DO: View each other's work and then return to seats.

TEACHER SAY: **Let's share just a few comments about others' work. Raise your hand if you would like to compliment someone's work. Be sure to tell us which monument or ticket you are complimenting and why.**



CHAPTER 3 MONUMENTAL DESIGNS

MY SELF-ASSESSMENT

Read each statement. For each row, color the stars in the box that describes your effort.

	☆	☆☆	☆☆☆
Academic Content	☆ I can correctly identify solids, liquids, and gases with help.	☆☆ I can correctly identify solids, liquids, and gases.	☆☆☆ I can correctly identify solids, liquids, and gases that were shared in class and some others that were not.
Quality of Performance	☆ I can create visuals, but they are not very neat or well organized.	☆☆ I can create visuals that are neat and well organized.	☆☆☆ I can create unique visuals that are exceptionally neat and well organized.
Life Skills	☆ I can use a checklist to make sure I include all required elements with help.	☆☆ I can independently use a checklist to make sure I include all required elements.	☆☆☆ I can independently use a checklist to make sure I include all required elements and create checklists for myself for other tasks.

176 PRIMARY 2



STUDENTS DO: Share compliments.

TEACHER SAY: **We only had time for a few compliments, but I know we could give compliments to everyone. Right now, though, it is time to reflect on our own work. Turn to My Self-Assessment in your student book. Be reflective about your learning as you decide how well you have accomplished these goals.**



STUDENTS DO: Self-assess using rubric.

3. Closing: Use the end of the class to reflect on learning. Encourage students to think, reflect, share, and listen.

TEACHER SAY: **We are ending this chapter today. In fact, we are ending our theme, "The World Around Me." Let's take time to think about all we have learned about the world around us. I will choose three students, one to lead a discussion about each chapter.**

TEACHER DO: Choose three students to be discussion leaders. Tell students which chapter they will discuss (What Is in the Night Sky?, Helping our Habitat, and Monumental Designs). Each leader will begin by sharing one special thing they learned in that chapter. They will then choose two more students to share. If time allows for more discussion, change the directions to fit the class's needs.

 STUDENTS DO: Summarize chapter learning.

TEACHER SAY: **Thank you, leaders. Before you sit back down, I have one more question. You may answer or you may choose another student to answer. How did the chapters help you understand the world around us?**

 STUDENTS DO: Respond or choose another student to answer.

TEACHER SAY: **It seems to me that we have all learned a lot about the world around us. Turn to the student sitting next to you and congratulate him or her for what has been learned about the world around us.**

Rubric Assessment (for teacher use)

	Approaching Expectation (1)	Meeting Expectation (2)	Exceeding Expectation (3)
Academic Content	Classifies and describes solids, liquids, and gases with help. *Science D.1.b.*	Classifies and describes solids, liquids, and gases and gives examples. *Science D.1.b.*	Classifies and describes solids, liquids, and gases. Offers examples of how materials can change form, such as solid ice melting into liquid. *Science D.1.b*
	Produces simple designs that include shapes but has difficulty identifying them correctly by name. *Math E.1.c.*	Produces designs that include shapes and identifies them correctly by name. *Math E.1.c.*	Produces complex designs that include newly learned shapes and identifies them correctly by name. *Math E.1.c.*
	Identifies Islamic and Coptic historic monuments with help but may not be able to explain their importance to Egyptian culture. *Social Studies C.2.c.*	Identifies Islamic and Coptic historic monuments and explains their importance to Egyptian culture. *Social Studies C.2.c.*	Identifies Islamic and Coptic historic monuments, explains their history and importance to Egyptian culture. *Social Studies C.2.c.*
	Uses a checklist to ensure that all requirements have been addressed with help or only partially uses the list. *Science F.1.c.*	Uses a checklist independently to ensure that all requirements have been addressed. *Science F.1.c.*	Uses a checklist independently to ensure that all requirements have been addressed and helps peers use the checklist. *Science F.1.c.*
Quality of Performance	Presents or displays artwork that is not very neat or is difficult to read. *Visual Art B.1.a.*	Presents or displays artwork with visuals that are neat and easy to read. *Visual Art B.1.a.*	Presents or displays artwork with appealing visuals that are exceptionally neat and easy to read. *Visual Art B.1.a.*
	Contributes to discussions about the text only when directly prompted. *Reading E.1.a.*	Contributes to discussions about the text and asks questions. *Reading E.1.a.*	Contributes to discussions about the text regularly, offering unique and thoughtful insights and questions. *Reading E.1.a.*
Life Skills	Offers feedback that is not helpful or does not relate to the plan or product.	Offers feedback to others that helps them improve their plan or product.	Offers insightful feedback to others that helps them improve their plan or product in a meaningful way.
	Manages and organizes tasks effectively, completing them in a timely manner only with the help of peers or the teacher.	Manages and organizes tasks effectively, completing them in a timely manner.	Manages and organizes tasks effectively, completing them in a timely manner. Helps organize peers and leads in this area.

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